USER'S MANUAL

RADview-PC/Lite

PC-Based Element Management System

Version 1.7

RAD
data communications
The Access Company

RADview-PC/Lite

PC-Based Element Management System

Version 1.7

User's Manual

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International Headquarters **RAD Data Communications Ltd.**	**North America Headquarters** **RAD Data Communications Inc.**
24 Raoul Wallenberg St. Tel Aviv 69719 Israel Tel: 972-3-6458181 Fax: 972-3-6498250 E-mail: market@rad.com	900 Corporate Drive Mahwah, NJ 07430 USA Tel: (201) 529-1100, Toll free: 1-800-444-7234 Fax: (201) 529-5777 E-mail: market@radusa.com

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Contents

Chapter 1. Introduction

1.1 Overview....1-1
System Features....1-1
Fault Management....1-1
Configuration Management....1-2
Supported Products and Generic Functions....1-2
1.2 System Requirements....1-4
Hardware Requirements....1-4
Software Requirements....1-5

Chapter 2. Installation and Setup

2.1 Package Contents....2-1
2.2 Installation....2-1
Installation Sequence....2-1
Installing the SNMPc Platform....2-1
Installing the RADview-PC/Lite Package....2-6
Installing RADview Shell....2-6
Installing RADview-PC/Lite....2-12
Installation Notes....2-16
Setting the SNMP Service Security Parameters in Windows 2003....2-16
Installing the License Manager Server (Optional)....2-18
Defining a Remote License Server....2-21
2.3 Post-Installation Steps....2-21
Installing Licenses....2-21
2.4 Uninstalling the RADview Package....2-22
Uninstalling RADview-PC/Lite....2-22
Uninstalling the SNMPc Platform....2-23

Chapter 3. Operation

3.1 Launching the SNMPc Platform....3-1
3.2 Using the SNMPc Platform....3-4
Viewing Network Maps....3-4
Viewing Alarm and Test Status Indications....3-5
3.3 Working with RADviewMAP....3-5
3.4 Using Radview Shell System Functions....3-8
Viewing the PC Shell Information....3-8
General Options....3-8
Viewing and Modifying Radview Properties....3-9
Setting Communication Parameters for Legacy Devices....3-10
Configuring Legacy Devices....3-11
Setting the Net Date and Time....3-11
Viewing Miscellaneous Radview Information....3-12

Chapter 4. Configuration Management

4.1 Licensing....4-1
Network Size....4-1
Equivalent Node Weights....4-2

Bundled License Points 4-3
Calculating License Points 4-3
Working with the License Service Manager 4-4
Viewing the Installed License Points 4-4
Viewing the Managed Element List 4-6
Adding a License 4-7
Removing a License 4-7
Starting and Stopping the License Service 4-8
Configuring the Server Side License Ports 4-9
4.2 Performing Backup and Restore 4-10
Backup and Restore Requirements 4-11
Configuring Backup and Restore 4-11
Setting Parameters in the mng164_backup.xml File 4-11
Backing Up System Components 4-14
Restoring System Components 4-15
4.3 Transferring Files Using TFTP 4-16
Opening the TFTP File Transfer Application 4-16
Changing the TFTP Default Settings 4-17
Editing the TFTP Database 4-18
Adding a Product Profile 4-18
Selecting the File to Download 4-25
Editing Product Data 4-25
Selecting Nodes for TFTP 4-27
Adding Agents for TFTP Operations 4-29
Transferring Files Using TFTP 4-31
Viewing TFTP File Transfer Reports 4-35
Saving the TFTP Database 4-38
Using Help 4-38
Exiting the Application 4-38
4.4 Viewing the Net Inventory 4-39
Opening the Application 4-39
Filtering the Display 4-41
Editing an Entity 4-43
Expanding/Collapsing Sublevels 4-43

Chapter 5. Performance Management

5.1 Viewing Product Statistics 5-1
5.2 Collecting Statistics from VMUX-400 Units 5-1
System Requirements 5-1
Managing Statistics Data 5-2
Statistics Collection Sequence 5-4
Starting the Statistics Collection Application 5-5
Configuring Statistics Collection 5-7
Viewing Group Descriptors and Performing Operations 5-7
Adding a Group Descriptor 5-9
Changing a Group Descriptor 5-11
Renaming a Group Descriptor 5-14
Starting/Stopping Statistics Collection Process 5-15
Viewing the Navigation Tree 5-16
Finding a Node 5-16
Collapsing the Navigation Tree 5-17
Expanding the Navigation Tree 5-17
Displaying/Hiding the Navigation Tree 5-17

Displaying the Map 5-18
Viewing the Statistics Chart 5-18
Trend View 5-18
Detailed View 5-20

Chapter 6. Security Management

Chapter 7. Fault Management

7.1 Alarms 7-1
7.2 Frequently Asked Questions 7-1
7.3 Technical Support 7-2

Index

Chapter 1
Introduction

1.1 Overview

RADview-PC/Lite is a user-friendly SNMP-based management system that provides monitoring and configuration of network elements. RADview-PC/Lite can operate either in standalone mode or can be integrated with an SNMP platform (CastleRock Computing's SNMPc platform) to extend its capabilities and add map services, such as color-coded network status indication.

System Features

RADview-PC/Lite includes the following features:

- Supports inband and out-of-band management
- Presents networks and their components in an easy-to-view graphical map format. Maps can be grouped according to hierarchies and their sublevels. User-defined graphics can be included.
- "Learns" the network by automatically discovering SNMP-manageable elements
- Polls nodes at periodic intervals or on user command, and relays the results of the polls by a combination of messages, color codes, log files, and other action.
- Prints log and map reports
- Gathers real-time statistics that can be displayed in line graph, bar chart, or tabular format
- Includes MIB compiler and browser to facilitate control of third-party equipment
- Provides fast automatic network recovery following discovery of a fault condition
- Allows for security control at the lobe and segment levels
- Supports HTTPS security protocol in agent configuration
- Uses reliable Microsoft Access database
- Runs under Microsoft Windows™.

Fault Management

RADview-PC/Lite monitors the network, detects events, and helps isolate problems and minimize network downtime. Network status changes are displayed

graphically at the network, device, card, and port levels. RADview-PC/Lite supports multiple map levels, enabling graphic display of the hierarchical network structure. A problem occurring at a lower level is forwarded to intermediate and upper levels for easy problem detection and isolation. Comprehensive log files of all traps are maintained, including identification of the trap source, event description, and date/time stamp. Information in the log is categorized according to severity level, and can be sorted, filtered, and exported to file.

Configuration Management

Configuration and diagnostics are performed through simple and user-friendly access to ConfiguRAD directly from the topology map (GUI cut-through), by double-clicking a network icon.

Note

For some packet switch products that are not supported by ConfiguRAD, double-clicking the network icon opens a Telnet session.

TFTP-based software and configuration transfer capabilities allow distribution of new software versions or configuration files to multiple network elements simultaneously, while collecting statistics and presenting reports on the process status. Configuration files can also be collected and distributed.

Note

Some features (for example, TFTP-based SW download) are available only when the device agent supports them. See Table 1-1 *for details.*

Supported Products and Generic Functions

Table 1-1 shows the products supported by RADview-PC/Lite, and the functions supported for each product. The symbol **+** indicates that the function is supported, the symbol **–** indicates that the function is not supported.

Table 1-1. Products and Functions Supported by RADview-PC/Lite

Product	Description	TFTP File Transfer	Net Inventory	Net Date and Time	Net Clear Alarms
APD-8	Multiprotocol FRAD providing easy, cost-effective access to a packet switching network	+	–	–	–
APS-8/16/24	Multiprotocol FRAD/Switches providing easy, cost-effective access to packet switching network, as well as packet switching capability for both X.25 and Frame Relay	+	–	–	–
Egate-20	Ethernet-over-E1/T1 gateway that aggregates and switches traffic from Fast Ethernet, over up to eight E1 or T1 circuits	+	+	–	–

Product	Description	TFTP File Transfer	Net Inventory	Net Date and Time	Net Clear Alarms
Egate-100	Ethernet aggregator, grooming Ethernet traffic carried over PDH (E1/T1) over SDH into a Gigabit Ethernet MAN	+	+	–	–
FPS-8	Multiprotocol FRAD/switch designed for a Regional or Central Office environment that provides fast, easy and cost-effective access to a packet switching network	+	–	–	–
RIC-155	Converter that provides simple and efficient connection of Fast Ethernet traffic over STM-1/OC-3 lines	+	+	+	+
RIC-155GE	Converter that provides simple and efficient connection of Gigabit Ethernet traffic over STM-1/OC-3c lines	–	–	–	–
RIC-622GE	Converter that provides simple and efficient connection of Gigabit Ethernet traffic over STM-4/OC-12c lines	–	–	–	–
RICi-E1/T1	Ethernet CLE (Customer-Located Equipment) providing a demarcation point between the private LAN and the operator's network, bridging between Fast Ethernet and E1/T1	+	+	–	–
RICi-E3/T3	Ethernet CLE (Customer-Located Equipment) providing a demarcation point between the private LAN and the operator's network, bridging between Fast Ethernet and E3/T3	+	+	–	–
RICi-4E1/T1, RICi-8E1/T1	Intelligent converters connecting Fast Ethernet LANs over four or eight bonded E1/T1 circuits	+	+	–	–
RICi-16E1/T1	Network Termination Unit (NTU) connecting Fast Ethernet LANs over 16 bonded E1/T1 circuits	+	+	–	–
RICi-155GE	Network termination unit (NTU) that bridges between Gigabit Ethernet networks and STM-1/OC-3c networks	+	+	-	-
RICi-622GE	Network termination unit (NTU) that bridges between Gigabit Ethernet networks and STM-4/OC-12 networks	+	+	-	-

Product	Description	TFTP File Transfer	Net Inventory	Net Date and Time	Net Clear Alarms
RICi-SE	Ethernet CLE (Customer-Located Equipment) providing a demarcation point between the private LAN and the operator's network, bridging between Fast Ethernet and Serial interface	+	+	–	–
SPS-3S/6/12	FRAD/PAD and multiprotocol packet switches providing easy, cost-effective access to packet switching network	+	–	–	–
SPS-4	FRAD/switch providing easy, cost-effective access to packet switching network, as well as packet switching capability for both X.25 and Frame Relay	+	–	+	–
VMUX-400	Compact standalone unit optimizing GSM Abis and Ater traffic and transporting it over either an E1 link, a Serial link, or an Ethernet link	+	+	–	–

1.2 System Requirements

RADview-PC/Lite package version 1.7 can be installed under Windows™ XP or Windows™ 2003 operating systems, according to the following hardware and software requirements.

Hardware Requirements

The following are the hardware requirements for networks containing up to 200 managed elements:

- IBM-PC compatible computer based on a Pentium-4, 3.0GHz or higher (or newer architecture)
- At least 2 GB of RAM (see Notes)
- At least 2 GB of free hard disk space (for installation)
- Color monitor (17-inch minimum), supporting 1024 × 768 resolution or higher
- CD or DVD drive.

Notes

- *In general, installing RADview-PC/Lite on a stronger CPU-based PC, equipped with more RAM, results in better performance.*
- *For larger networks containing more than 200 managed elements, see FAQ 1168 at the RAD Technical Support website.*

Software Requirements

The following software is required:

- Microsoft Windows XP with Service Pack 1 or later, or Windows 2003 with Service Pack 1 or later, without Terminal services
- Windows display font size set to normal (96 dpi)
- Windows default input language set to English
- SNMPc Platform version 7.1 (optional), or RADview standalone application
- The following Windows services must be installed and configured to run automatically:
  - SNMP service
  - SNMP trap service
  - Server service.

Notes

- *The RADview-PC/Lite installation provides access to its database for the user that performed the installation.*
- *Java Virtual Machine must be installed in order to view the User's Manual properly. A Java plug for downloading and installation is available on SUN's home page http://java.sun.com/*

Chapter 2

Installation and Setup

This chapter describes the procedures to install the RADview-PC/Lite package.

2.1 Package Contents

The RADview-PC/Lite application package includes the following items:

- RADview-PC/Lite Installation CD
- RADview-PC/SNMP Platform Installation CD (optional)
- Installation guide
- Technical documentation CD.

2.2 Installation

Installation Sequence

The RADview-PC/Lite package must be installed in the following sequence:

1. Install the SNMPc platform
2. Install the RADview-PC/Lite package.

Note *If you are installing under the Windows 2003 operating system, verify that **Terminal Server** is not selected in **Start > Control Panel > Add or Remove Programs > Add/Remove Windows Components**.*

Installing the SNMPc Platform

Note *For a complete description of SNMPc, use the* Getting Started Guide *that is included in the SNMP package.*

➤ To install the RADview-PC/SNMP Platform:

1. Insert the RADview-PC/SNMP Platform Installation CD into the CD drive.

   A message appears to remind you to keep a copy of the license.

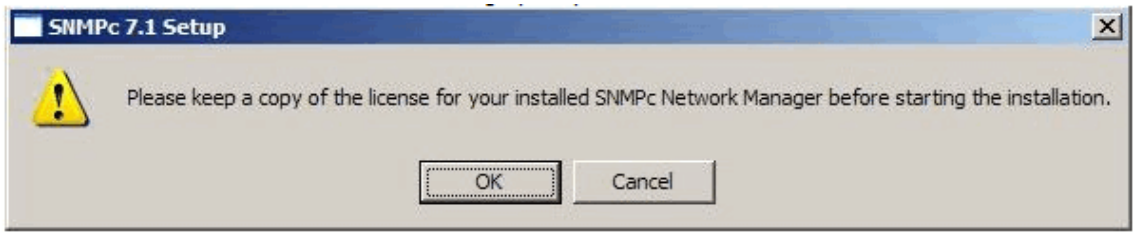
SNMPc 7.1 Setup
Please keep a copy of the license for your installed SNMPc Network Manager before starting the installation.
OK
Cancel

Figure 2-1. Warning to Keep SNMPc License

2. Click ‹**OK**› to close the message box.

   The setup starts automatically. If for some reason the setup does not start, run **setup.exe** from the Setup directory on the CD.

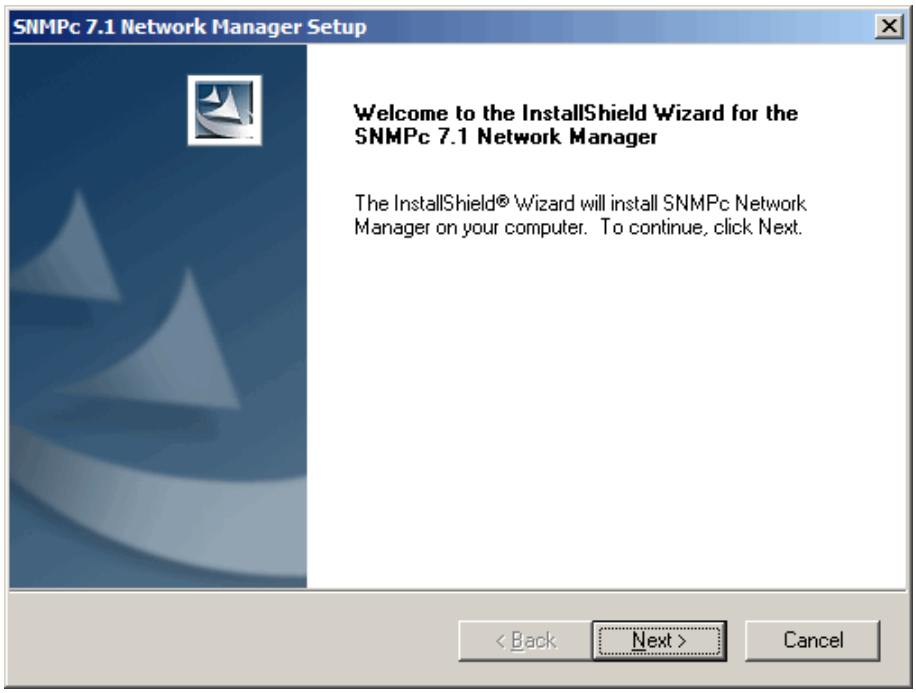
SNMPc 7.1 Network Manager Setup
Welcome to the InstallShield Wizard for the SNMPc 7.1 Network Manager
The InstallShield® Wizard will install SNMPc Network Manager on your computer. To continue, click Next.
< Back
Next >
Cancel

Figure 2-2. SNMPc Network Manager Setup Dialog Box

3. Click ‹**Next**› to begin installing the SNMPc platform.

   The SNMPc Network Manager Setup Component Selection dialog box appears.

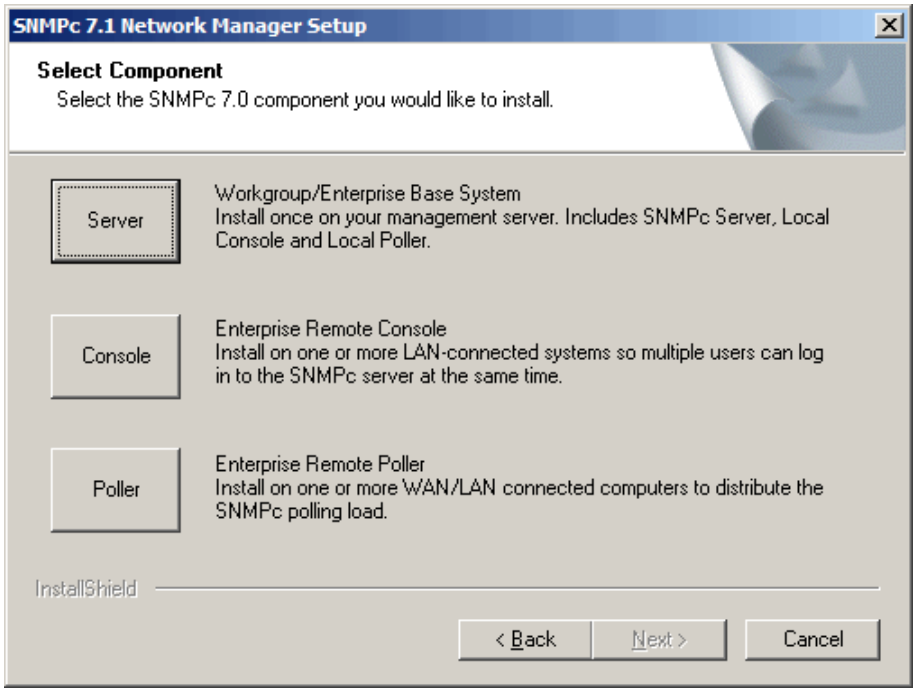
SNMPc 7.1 Network Manager Setup
Select Component
Select the SNMPc 7.0 component you would like to install.
Server
Workgroup/Enterprise Base System
Install once on your management server. Includes SNMPc Server, Local Console and Local Poller.
Console
Enterprise Remote Console
Install on one or more LAN-connected systems so multiple users can log in to the SNMPc server at the same time.
Poller
Enterprise Remote Poller
Install on one or more WAN/LAN connected computers to distribute the SNMPc polling load.
InstallShield
< Back
Next >
Cancel

Figure 2-3. SNMPc Network Manager Setup Component Selection Dialog Box

4. Select the **Server** component, as this includes a local console and polling agent, and then click ‹**Next**›.

   The Choose Installation Directory dialog box appears.

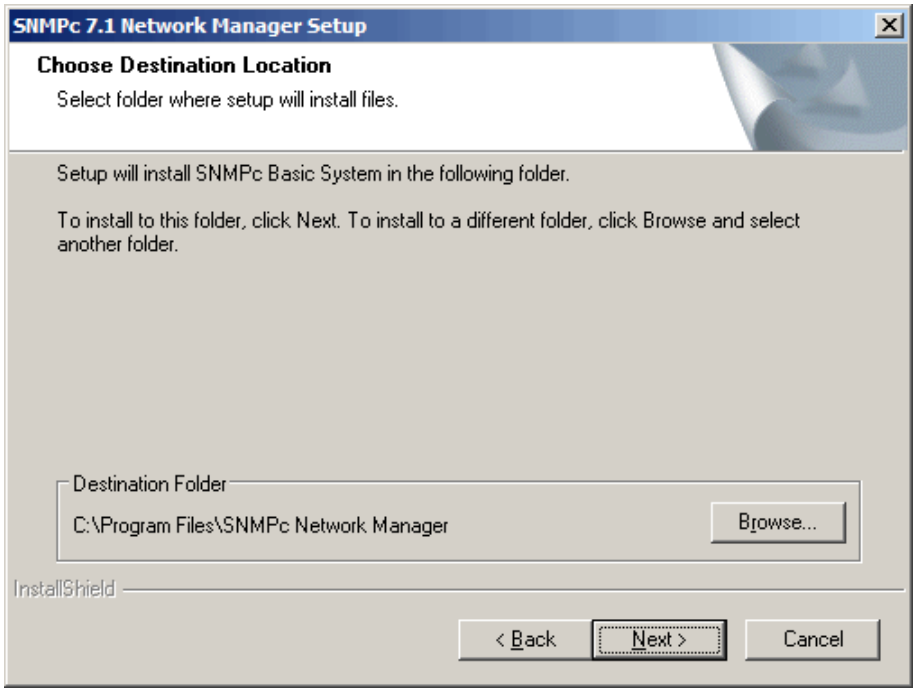
SNMPc 7.1 Network Manager Setup
Choose Destination Location
Select folder where setup will install files.
Setup will install SNMPc Basic System in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\SNMPc Network Manager
Browse...
InstallShield
< Back
Next >
Cancel

Figure 2-4. Choose Installation Directory Dialog Box

5. Click ‹**Next**› to accept the default installation directory, or select a different location, and then click ‹**Next**›.

   The Discovery Seed dialog box appears.

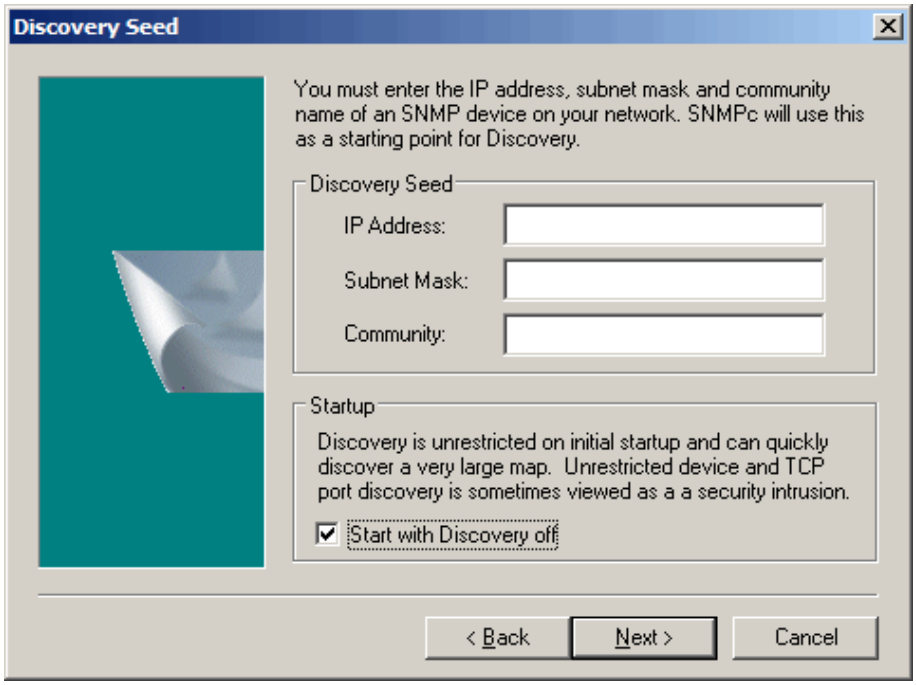
Discovery Seed
You must enter the IP address, subnet mask and community name of an SNMP device on your network. SNMPc will use this as a starting point for Discovery.
Discovery Seed
IP Address:
Subnet Mask:
Community:
Startup
Discovery is unrestricted on initial startup and can quickly discover a very large map. Unrestricted device and TCP port discovery is sometimes viewed as a a security intrusion.
Start with Discovery off
< Back
Next >
Cancel

Figure 2-5. Discovery Seed Dialog Box

6. Select the **Start with Discovery off** option, and then click ‹**Next**›.

   The Select Program Folder dialog box appears.

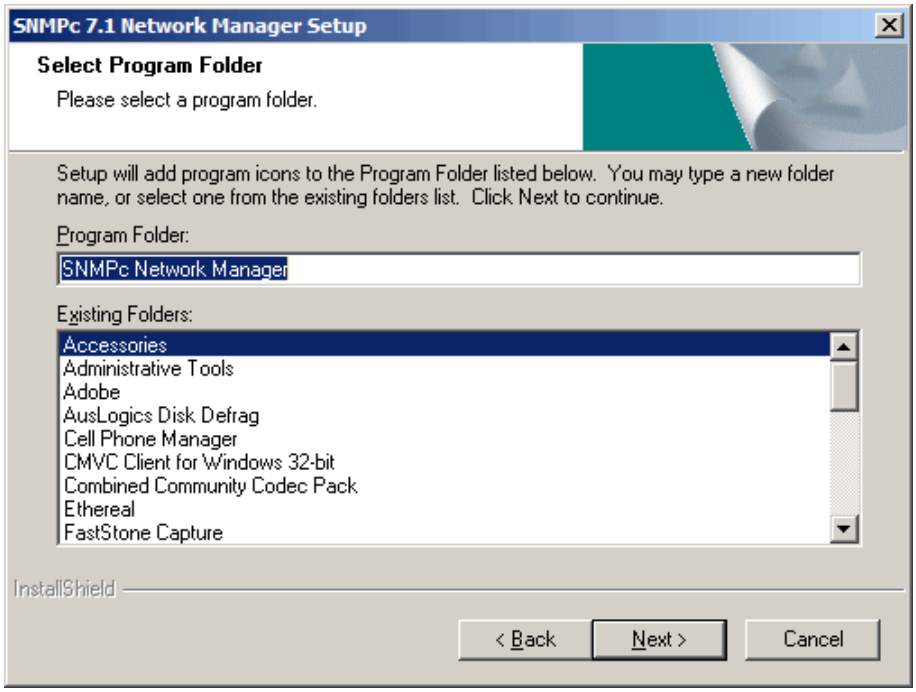
SNMPc 7.1 Network Manager Setup
Select Program Folder
Please select a program folder.
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folder:
SNMPc Network Manager
Existing Folders:
Accessories
Administrative Tools
Adobe
AusLogics Disk Defrag
Cell Phone Manager
CMVC Client for Windows 32-bit
Combined Community Codec Pack
Ethereal
FastStone Capture
InstallShield
< Back
Next >
Cancel

Figure 2-6. Select Program Folder Dialog Box

7. Click ‹**Next**› to accept the default program folder for the SNMP program icons, or select a different folder, and then click ‹**Next**›.

   Once the destination directory is selected, the installation begins. The progress of the installation is indicated by the progress bar.

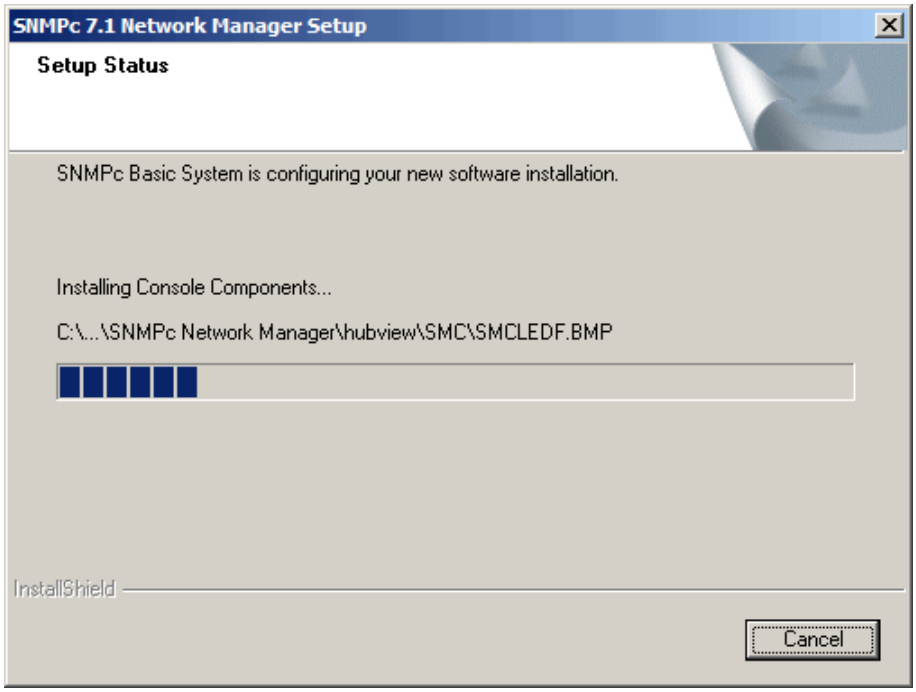

Figure 2-7. SNMPc Installation Progress Bar

8. When the installation is complete, select whether you want to view the Readme file and/or run the SNMPc Network manager upon exiting.

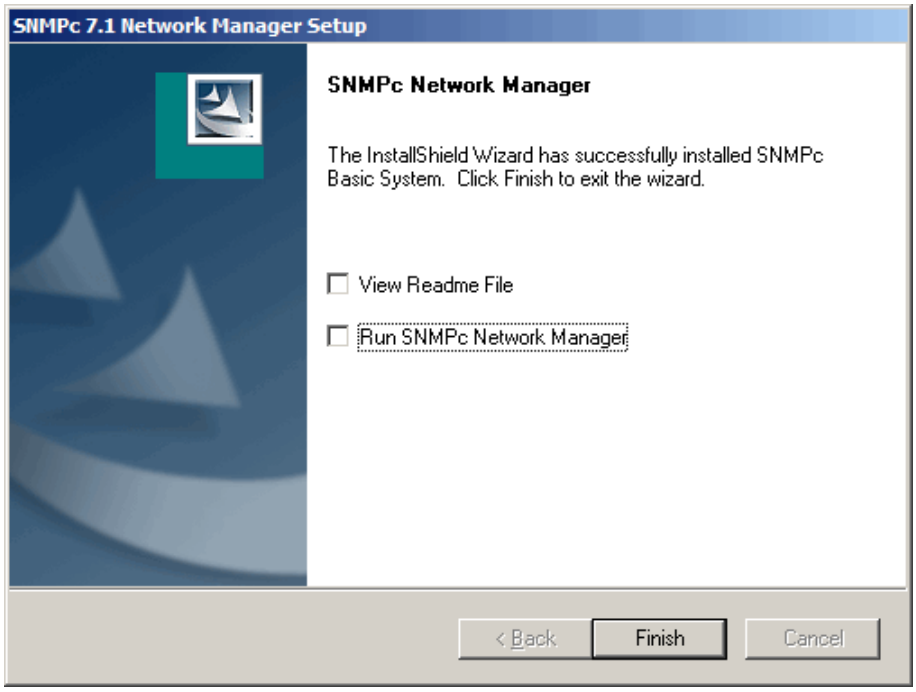
SNMPc 7.1 Network Manager Setup
SNMPc Network Manager
The InstallShield Wizard has successfully installed SNMPc Basic System. Click Finish to exit the wizard.
View Readme File
Run SNMPc Network Manager
< Back
Finish
Cancel

Figure 2-8. SNMPc Installation Completed

9. Click ‹**Finish**› to exit the installation wizard.

   Depending on your option selection in the previous step, the Readme file is displayed and/or the SNMPc Network Manager starts.

Note *The SNMPc setup creates a new Windows program group, **SNMPc Network Manager**, containing icons for the SNMPc programs. The Windows file **win.ini** is also changed.*

Installing the RADview-PC/Lite Package

This section describes installation of the RADview-PC/Lite package. The installation includes the following stages:

- Installing RADview Shell
- Installing RADview-PC/Lite.

Follow the instructions in the order listed below to install the appropriate version of RADview-PC/Lite.

Note *SNMPc Platform version 7.1 must be installed before installing RADview-PC/Lite package. Otherwise, RADview-PC/Lite installs as a standalone application.*

Installing RADview Shell

Installing RADview Shell is the first part required in the installation of the RADview-PC/Lite package.

➤ **To install RADview Shell:**

1. Insert the RADview-PC/Lite Installation CD into the CD drive.

   The RADview-PC/Lite setup dialog box appears (see *Figure 2-9*).

Note *It can take up to a minute for the setup dialog box to appear. If for some reason it does not appear automatically, double-click **autorun.exe** or **setup.exe** in the CD root directory.*

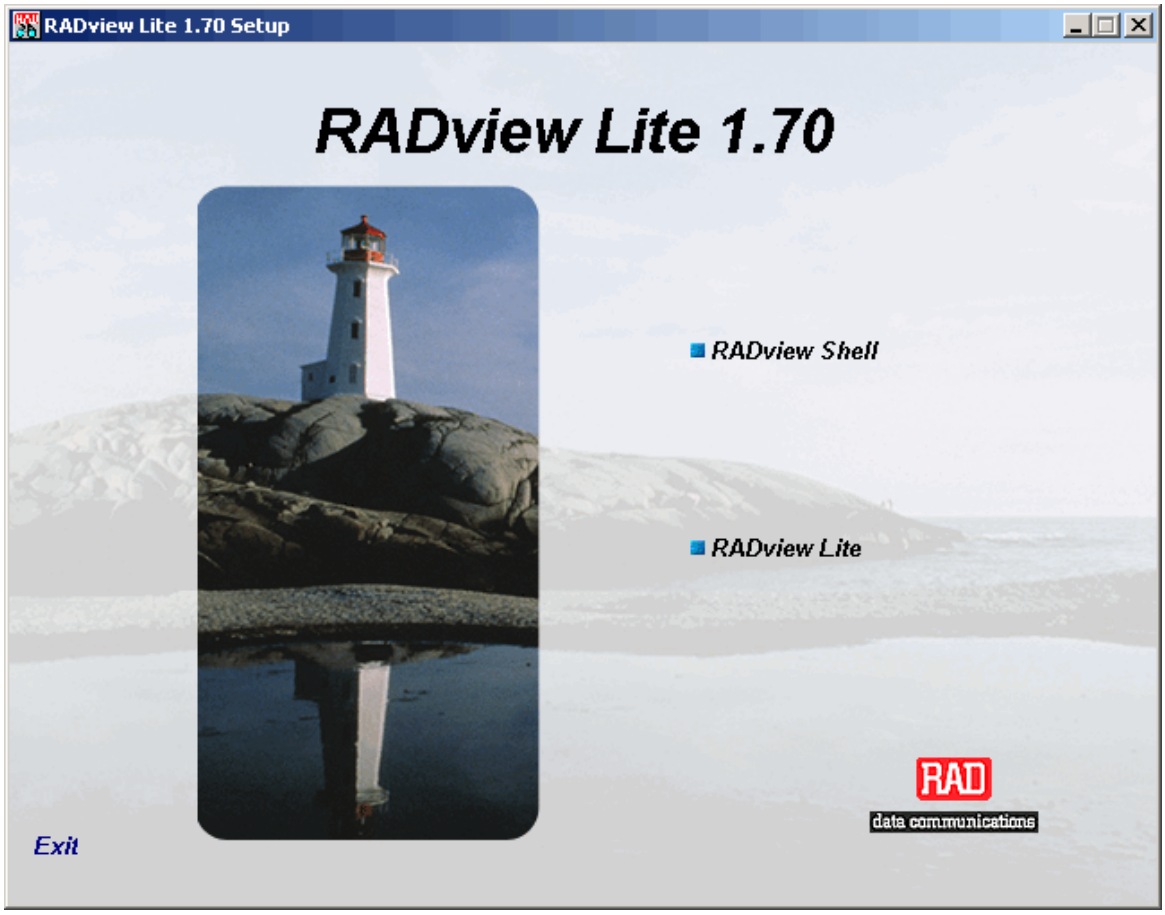

Figure 2-9. RADview-PC/Lite Setup Dialog Box

2. In the RADview-PC/Lite setup dialog box, click **RADview Shell**.

   The Welcome to RADview Shell Setup dialog box appears.

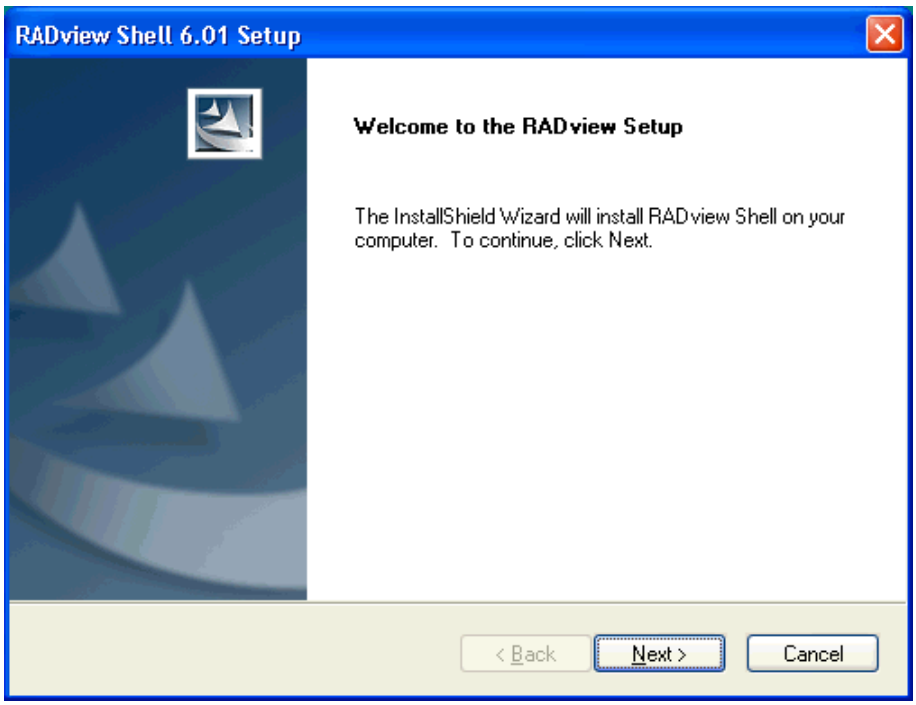
RADview Shell 6.01 Setup
Welcome to the RADview Setup
The InstallShield Wizard will install RADview Shell on your computer. To continue, click Next.
< Back
Next >
Cancel

Figure 2-10. Welcome to RADview Shell Setup Dialog Box

3. Click <**Next**> to continue installation.

   The Choose Destination Location dialog box appears.

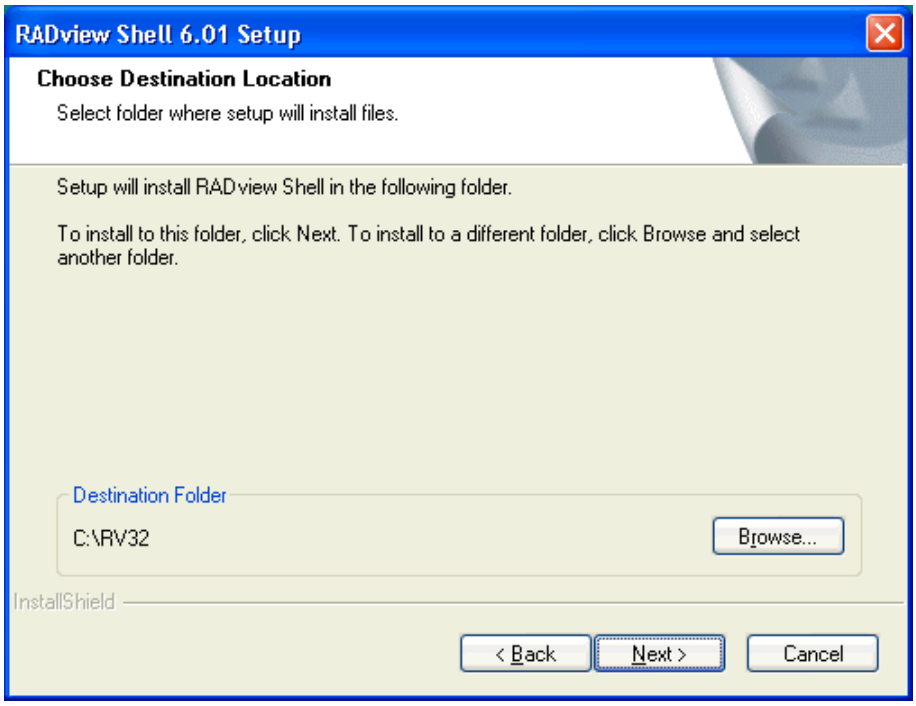
RADview Shell 6.01 Setup
Choose Destination Location
Select folder where setup will install files.
Setup will install RADview Shell in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\RV32
Browse...
InstallShield
< Back
Next >
Cancel

Figure 2-11. Choose Destination Location Dialog Box

4. Define the installation location by clicking <**Browse**> (if you do not want to use the default **C:\RV32** location), and click <**Next**>.

   The Select Program Folder dialog box appears.

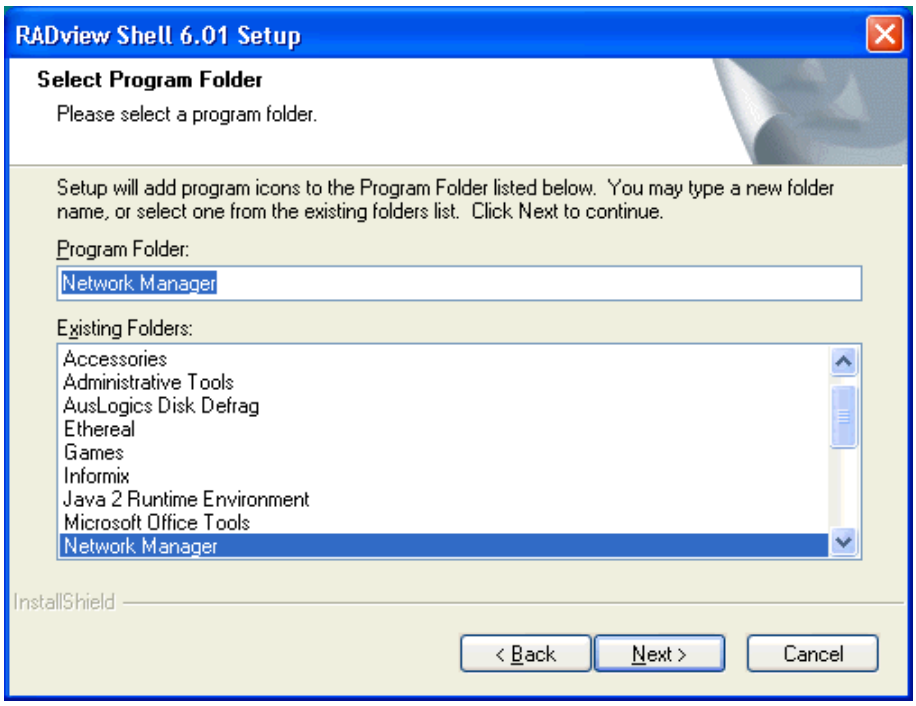

Figure 2-12. Select Program Folder Dialog Box

5. Select the program folder, and click <**Next**>.

   If a previous installation of RADview Shell is detected, the Database Options Selection dialog box appears. Otherwise the Platform Selection dialog box appears (see *Figure 2-14* and skip to *step 6*).

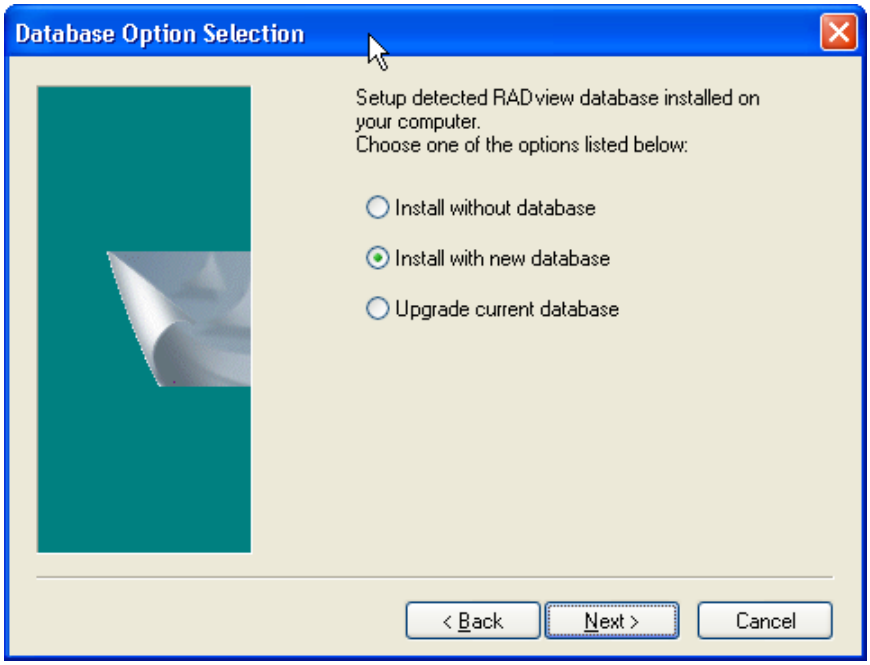
Database Option Selection
Setup detected RADview database installed on your computer.
Choose one of the options listed below:
Install without database
Install with new database
Upgrade current database
< Back
Next >
Cancel

Figure 2-13. Upgrade Options

In the Database Options Selection dialog box, choose the appropriate database installation option:

- Only when reinstalling RADview, select **Install with new Database**. Use this option if the database is corrupted and must be reinstalled.
- When installing a new application that has not been installed previously, select **Upgrade the Current Database**.
- When installing an application that has previously been installed:
  - Select **Install without the Database** to install the application without affecting the current database.
  - Select **Upgrade the Current Database** to upgrade the existing database.

Then, click <**Next**>.

The Platform Selection dialog box appears.

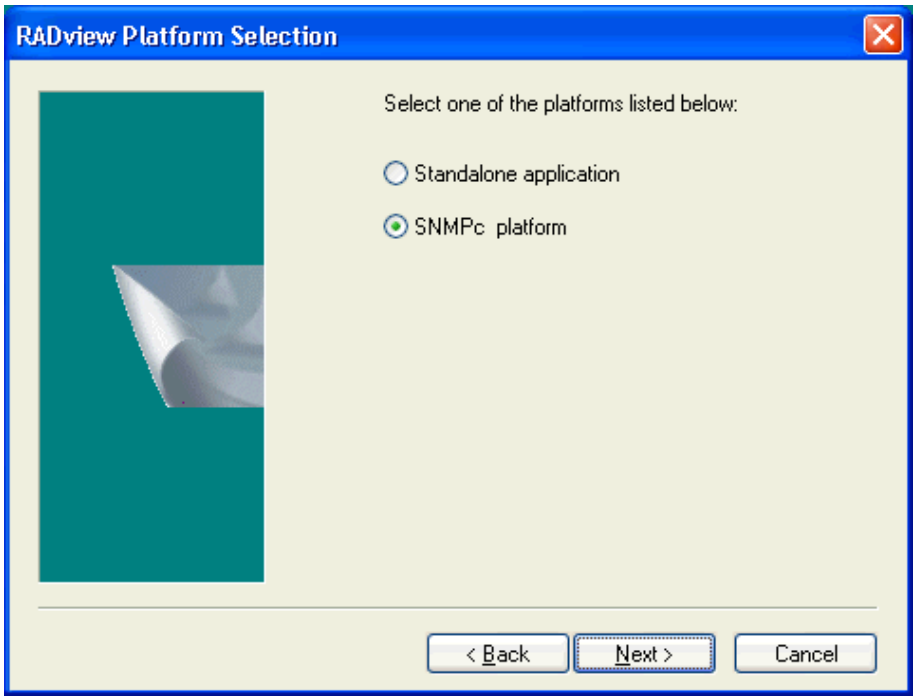

Figure 2-14. Platform Selection

6. Select the platform you want to use to run RADview-PC/Lite:
   - **SNMPc platform**: The SNMPc GUI provides the basis for RADview maps
   - **Standalone application**: The RADViewMAP application allows you to define network elements for RADview agents.
7. Click <**Next**>.

   The Start Copying Files dialog box appears.

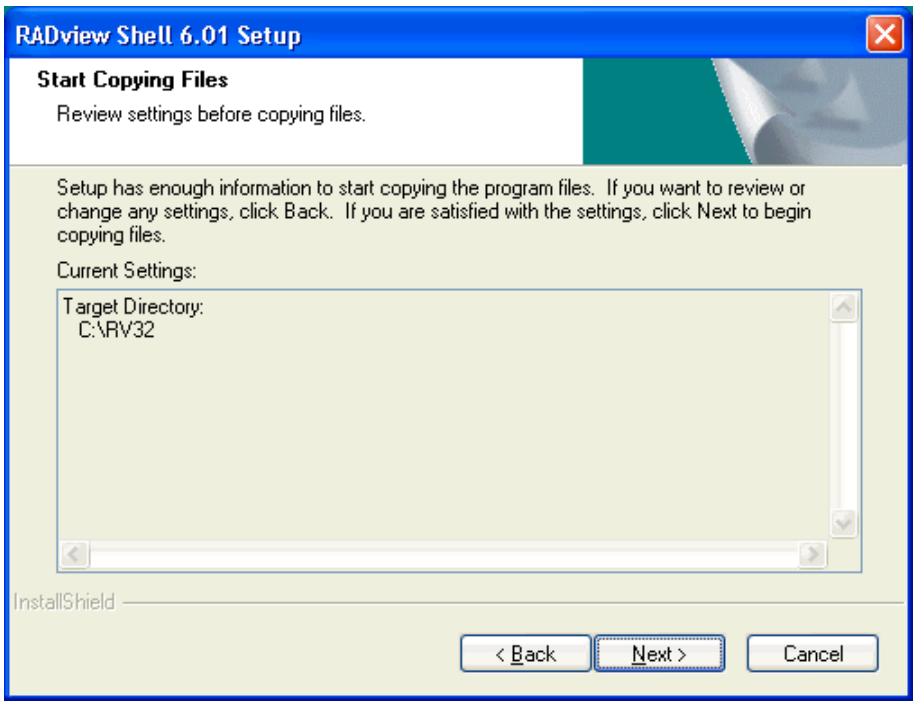
RADview Shell 6.01 Setup
Start Copying Files
Review settings before copying files.
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
Target Directory:
C:\RV32
InstallShield
< Back
Next >
Cancel

Figure 2-15. Start Copying Files Dialog Box

8. Click ‹**Next**› to confirm the installation and continue.

   The installation starts copying files, and when the installation has completed, the Setup Complete dialog box appears.

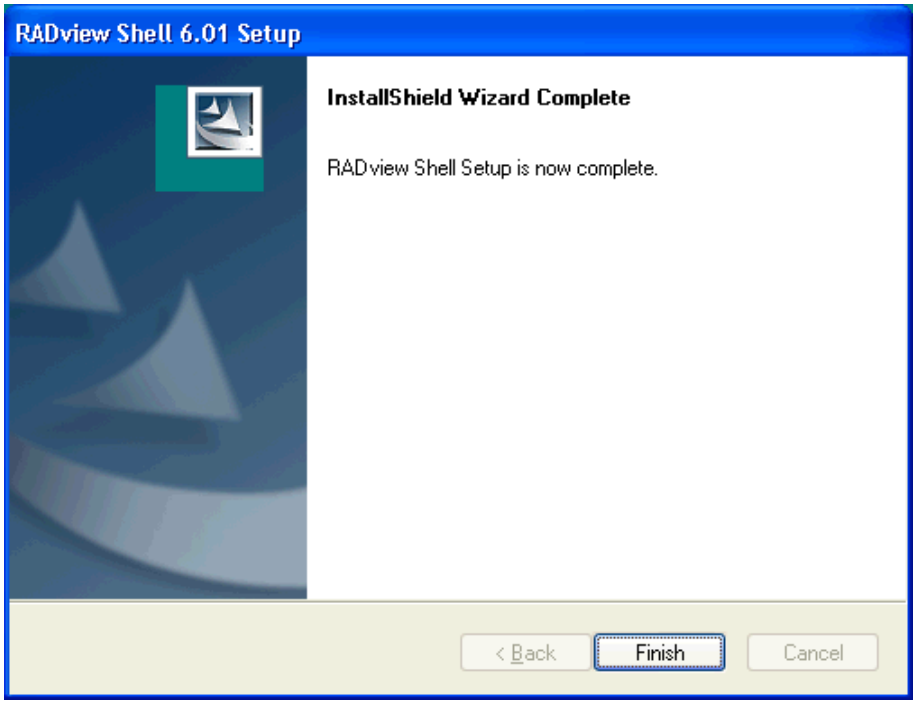

Figure 2-16. Setup Complete Dialog Box

9. Click ‹**Finish**› to exit the installation.

   The RADview shell is installed.

Installing RADview-PC/Lite

Installing RADview-PC/Lite is the last part required in the installation of the RADview package. When you install RADview-PC/Lite, the TFTP File Transfer utility is automatically installed. The TFTP file transfer utility allows transferring of files to/from managed product units. If you intend to use the RAD TFTP utility, you also need to install a TFTP server on the RADview workstation.

Note *You do not have to use the RAD TFTP file transfer utility. You can install any other utility, such as 3Cdaemon (available from www.3com.com) or PumpKIN (available from http://kin.klever.net/pumpkin/).*

➤ **To install RADview-PC/Lite:**

1. In the RADview-PC/Lite setup dialog box (see *Figure 2-9*), click **RADview Lite**.

   The Welcome to RADview-PC/Lite Setup dialog box appears.

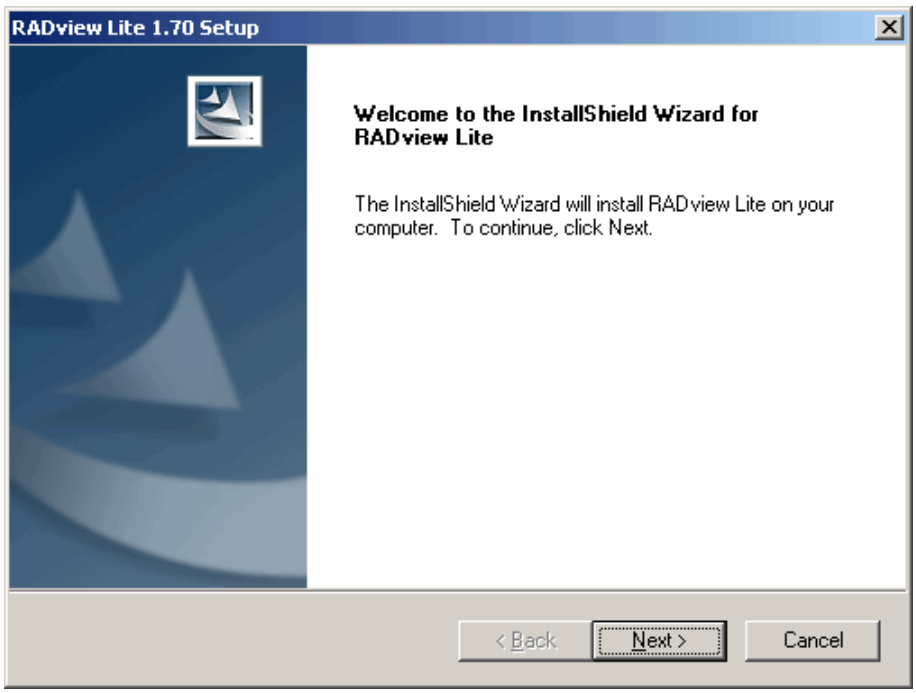
RADview Lite 1.70 Setup
Welcome to the InstallShield Wizard for RADview Lite
The InstallShield Wizard will install RADview Lite on your computer. To continue, click Next.
< Back
Next >
Cancel

Figure 2-17. Welcome to RADview-PC/Lite Setup Dialog Box

2. Click ‹**Next**›.

   The Optional Features dialog box appears.

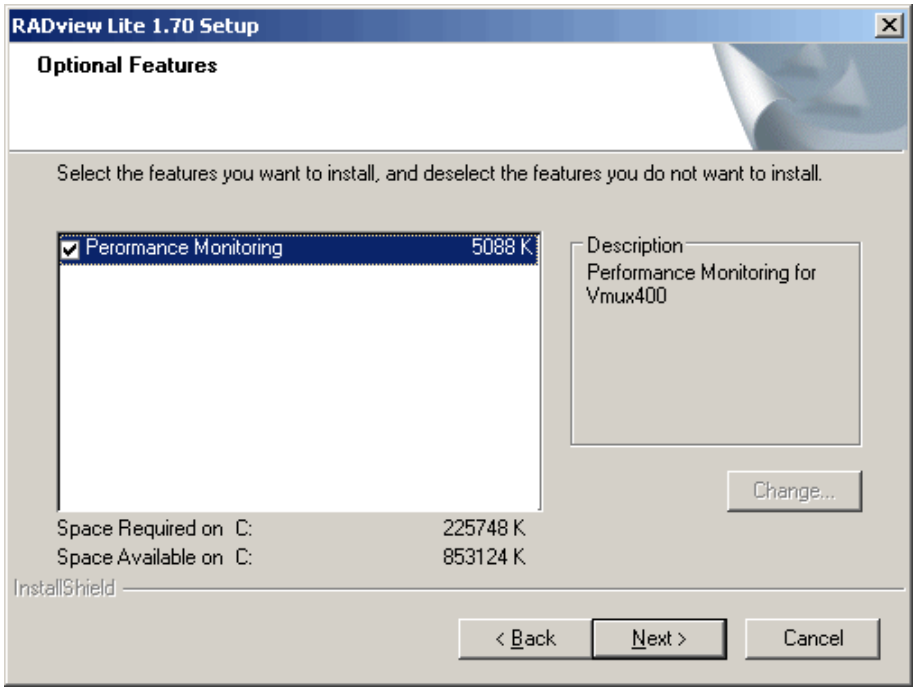
RADview Lite 1.70 Setup
Optional Features
Select the features you want to install, and deselect the features you do not want to install.
Perormance Monitoring 5088 K
Description
Performance Monitoring for Vmux400
Change...
Space Required on C: 225748 K
Space Available on C: 853124 K
InstallShield
< Back
Next >
Cancel

Figure 2-18. Optional Features Dialog Box

3. Select **Performance Monitoring** if you wish to install the performance monitoring application, and click <**Next**>.

   The SNMPc Configuration Warning dialog box appears only when newer MIBs are being installed. If not, the Start Copying Files dialog box appears (see *Figure 2-20* and skip to *step 6*).

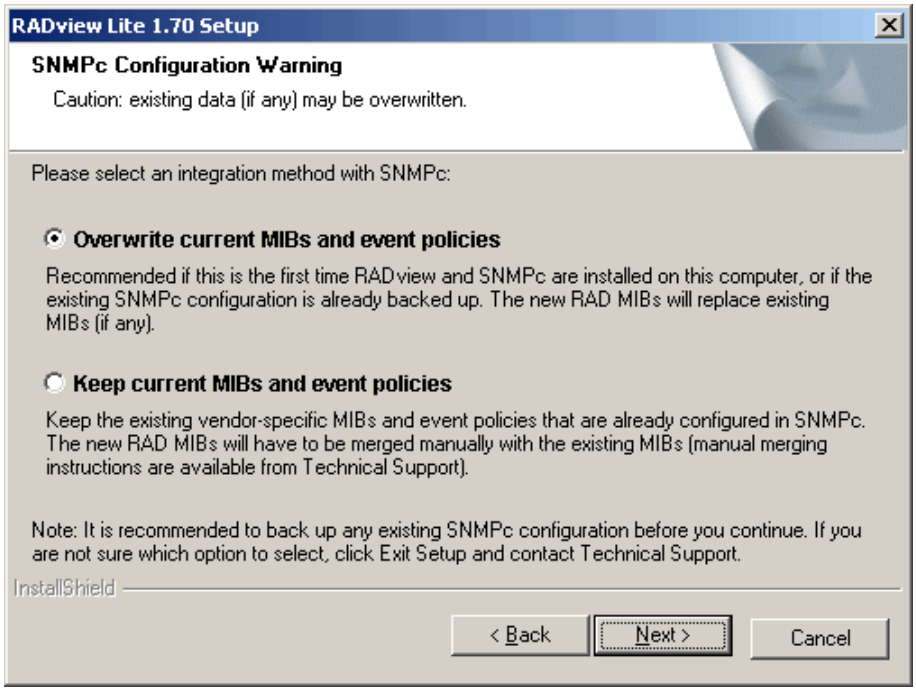
RADview Lite 1.70 Setup
SNMPc Configuration Warning
Caution: existing data (if any) may be overwritten.
Please select an integration method with SNMPc:
Overwrite current MIBs and event policies
Recommended if this is the first time RADview and SNMPc are installed on this computer, or if the existing SNMPc configuration is already backed up. The new RAD MIBs will replace existing MIBs (if any).
Keep current MIBs and event policies
Keep the existing vendor-specific MIBs and event policies that are already configured in SNMPc. The new RAD MIBs will have to be merged manually with the existing MIBs (manual merging instructions are available from Technical Support).
Note: It is recommended to back up any existing SNMPc configuration before you continue. If you are not sure which option to select, click Exit Setup and contact Technical Support.
InstallShield
< Back
Next >
Cancel

Figure 2-19. SNMPc Configuration Warning – Select MIB Option

4. Select one of the following options:
   - **Overwrite current MIBs and event policies** –Choose this option if you want the new MIBs to replace your current MIBs, or if this is a first-time installation.
   - **Keep current MIBs and event policies** – Choose this option if you want to preserve your current MIBs, and later merge them manually with the new RAD MIBs.
5. Click <**Next**>.

   The Start Copying Files dialog box appears.

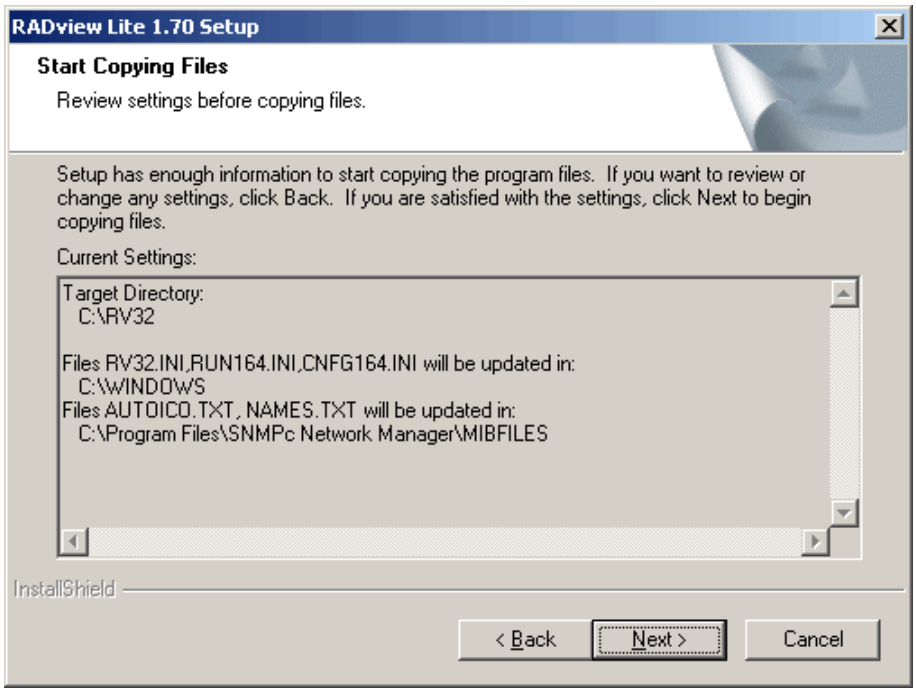
RADview Lite 1.70 Setup
Start Copying Files
Review settings before copying files.
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
Target Directory:
C:\RV32
Files RV32.INI,RUN164.INI,CNFG164.INI will be updated in:
C:\WINDOWS
Files AUTOICO.TXT, NAMES.TXT will be updated in:
C:\Program Files\SNMPc Network Manager\MIBFILES
InstallShield
< Back
Next >
Cancel

Figure 2-20. Start Copying Files Dialog Box

6. Click <**Next**> to confirm the installation setup should start copying files.

   The installation continues with file copying, and when the installation has completed, the Setup Complete dialog box appears.

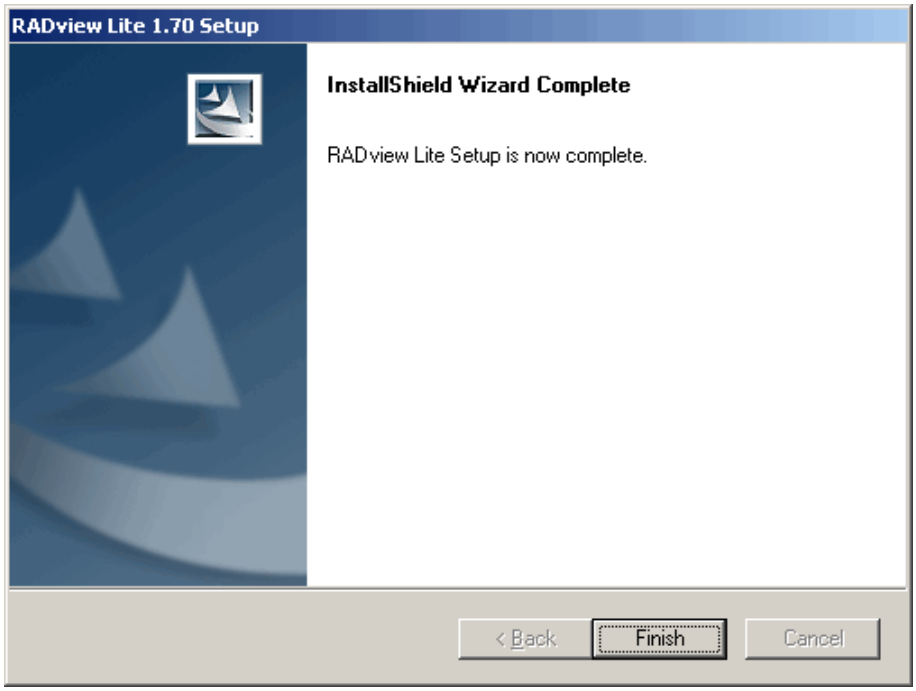

Figure 2-21. Setup Complete Dialog Box

7. Click ‹**Finish**› to exit the installation.

   A message is displayed informing you that RADview License Manager will be installed, and asking whether you want to install RADview License Server too.

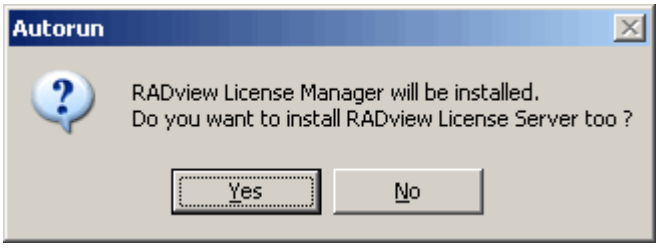

Figure 2-22. License Manager Dialog Box

Note *While the recommended configuration includes installing the License Server on the same host as the License Manager, it is also possible to install the License Server on a different host. The License Server must be installed on the local host if it is the only designated management station in the network. If this is not the only designated management station, then the License Server can be installed either on this workstation or on another host. Should you wish to install the License Server on a separate host (without installing the License Service Manager on the separate host), see* Installation Notes*.*

8. Click **‹No›** if you just want to install the License Service Manager (without the Server); click **‹Yes›** if you also want the License Server to be installed along with the License Service Manager.
9. Click ‹**Exit**› in the RADview-PC/Lite setup dialog box (see *Figure 2-9*).

10. The Restart Confirmation dialog box appears stating that you must restart your computer for the installation to take effect.

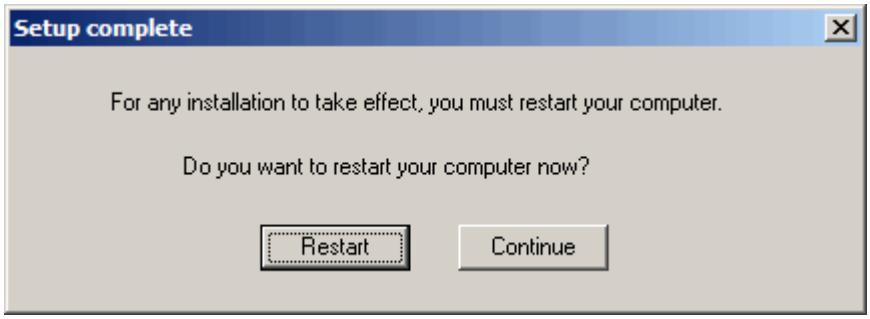
Setup complete
For any installation to take effect, you must restart your computer.
Do you want to restart your computer now?
Restart
Continue

Figure 2-23. Restart Confirmation

11. Click ‹**Restart**› to restart your computer.

    Once the restart is completed, your system is fully installed and RADview-PC/Lite is ready for use.

Installation Notes

Setting the SNMP Service Security Parameters in Windows 2003

If you are installing RADview under Windows 2003, you need to add the public SNMP community to enable identification of the workstation in SNMP requests.

➤ **To add the SNMP community:**

1. From the Control Panel, access Administrative Tools › Services› SNMP Service › Properties.

   The SNMP Service Properties dialog box appears.

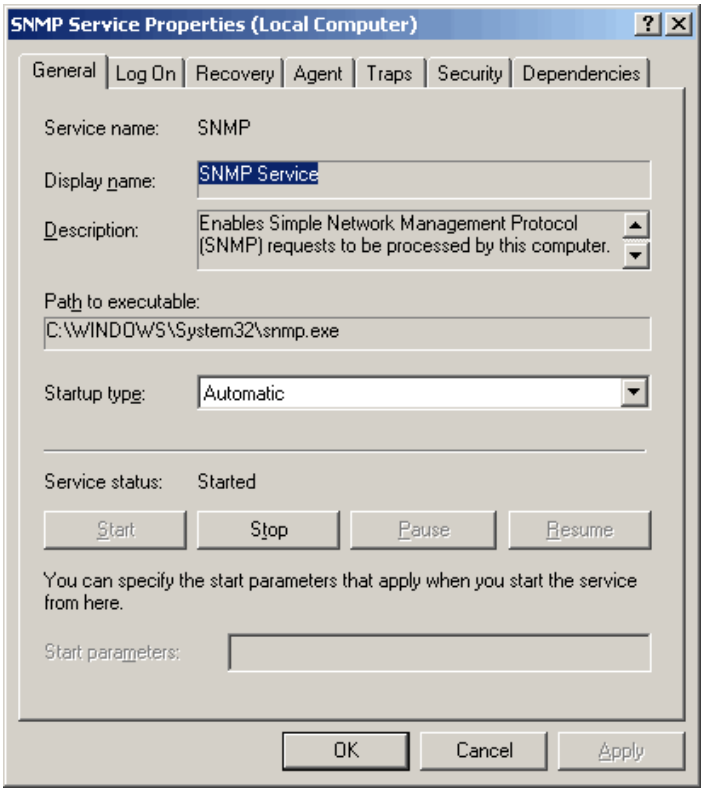

Figure 2-24. SNMP Service Properties Dialog Box

2. Click the **Security** tab.

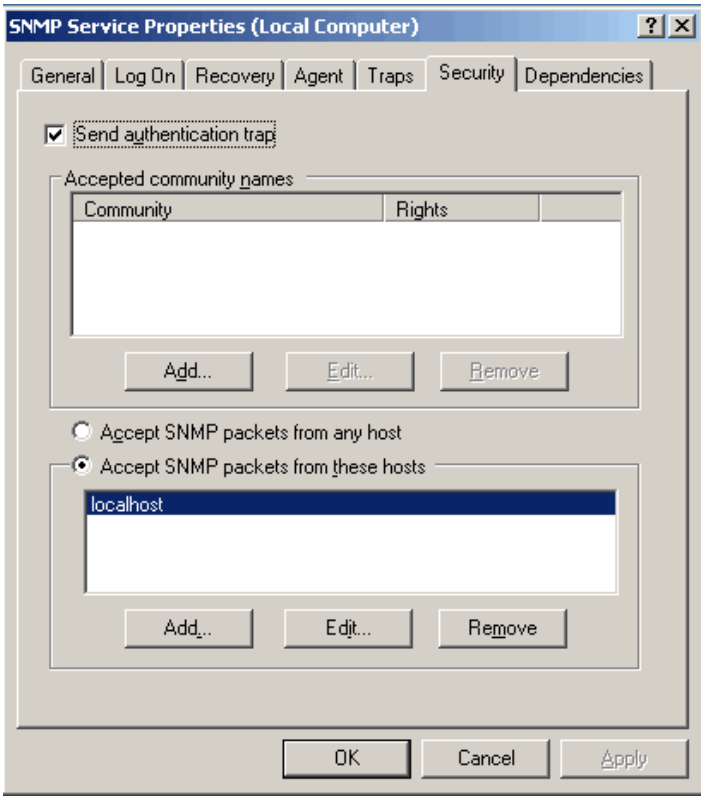

Figure 2-25. SNMP Service Properties – Security Tab

3. Click ‹**Add**› under **Accepted community names**.

The **SNMP Service Configuration** dialog box appears.

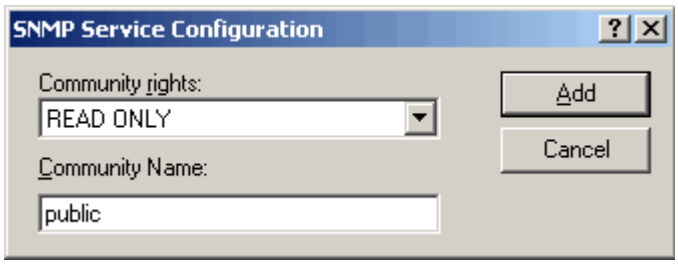

Figure 2-26. SNMP Service Configuration Dialog Box

4. In the Community name text box, type **public** and then click <**Add**>.

   The profile is added to the accepted community names.

5. Click <**OK**> to close the SNMP Service Properties dialog box.

Installing the License Manager Server (Optional)

In general the License Manager Server is automatically installed when the RADview package is installed. This section describes how to install the License Server or License Manager manually. Manual installation can be used in cases where the License Manager and the License Server need to be installed on separate hosts.

➤ **To manually install the License Server or License Manager:**

1. Double-click the **LicService.msi** file, located in the **License** folder on the CD.

   The RADview License Setup dialog box appears.

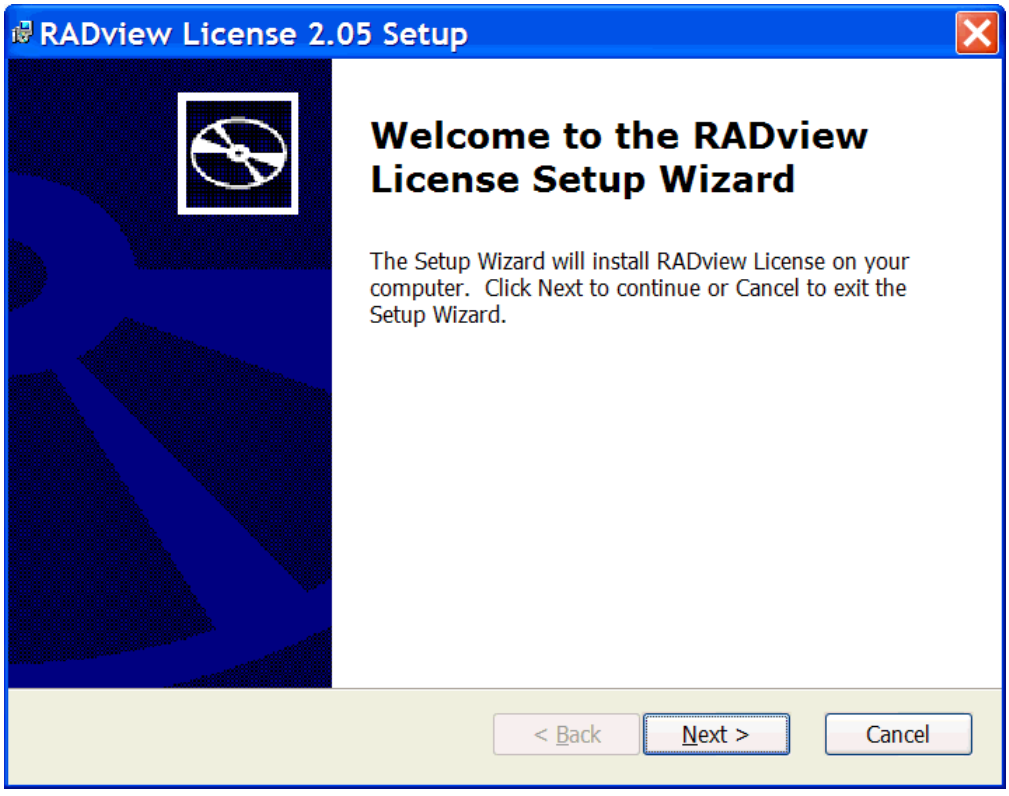
RADview License 2.05 Setup
Welcome to the RADview License Setup Wizard
The Setup Wizard will install RADview License on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
< Back
Next >
Cancel

Figure 2-27. RADview License Setup Window

2. Click **<Next>**.

   The Choose Setup Type dialog box appears.

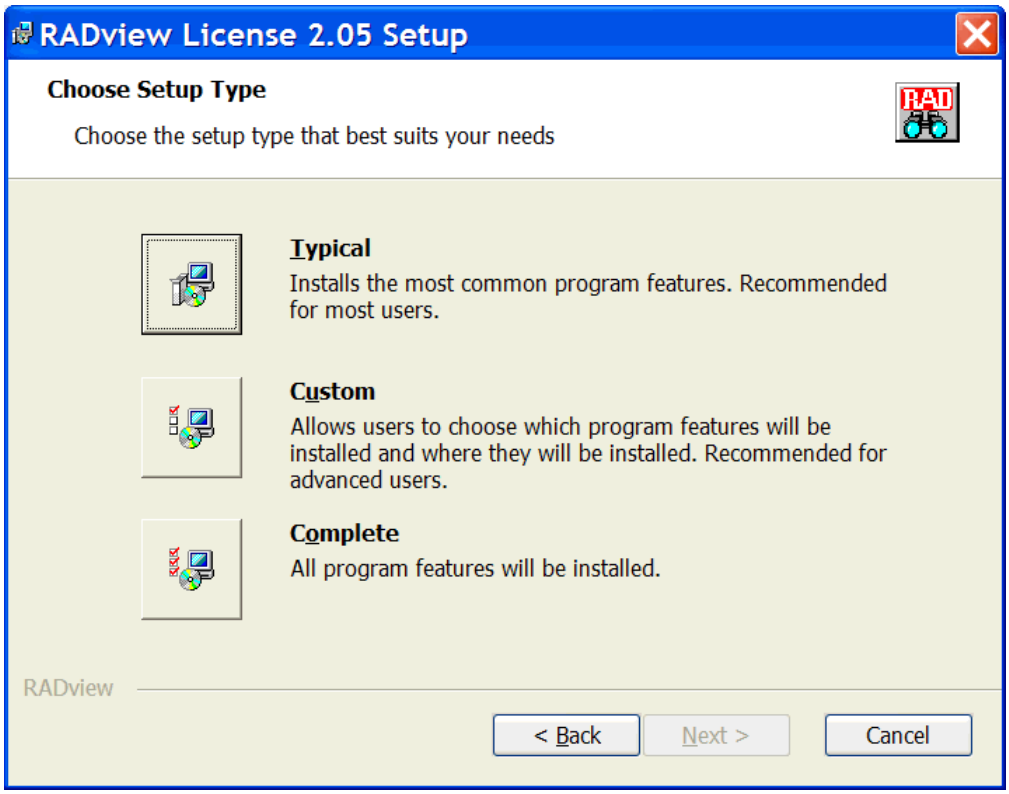
RADview License 2.05 Setup
Choose Setup Type
Choose the setup type that best suits your needs
Typical
Installs the most common program features. Recommended for most users.
Custom
Allows users to choose which program features will be installed and where they will be installed. Recommended for advanced users.
Complete
All program features will be installed.
RADview
< Back
Next >
Cancel

Figure 2-28. Choose Setup Type Dialog Box

3. Click **<Complete>** to install the License Server with the License Manager with all program features.

   The Ready to Install License dialog box is displayed.

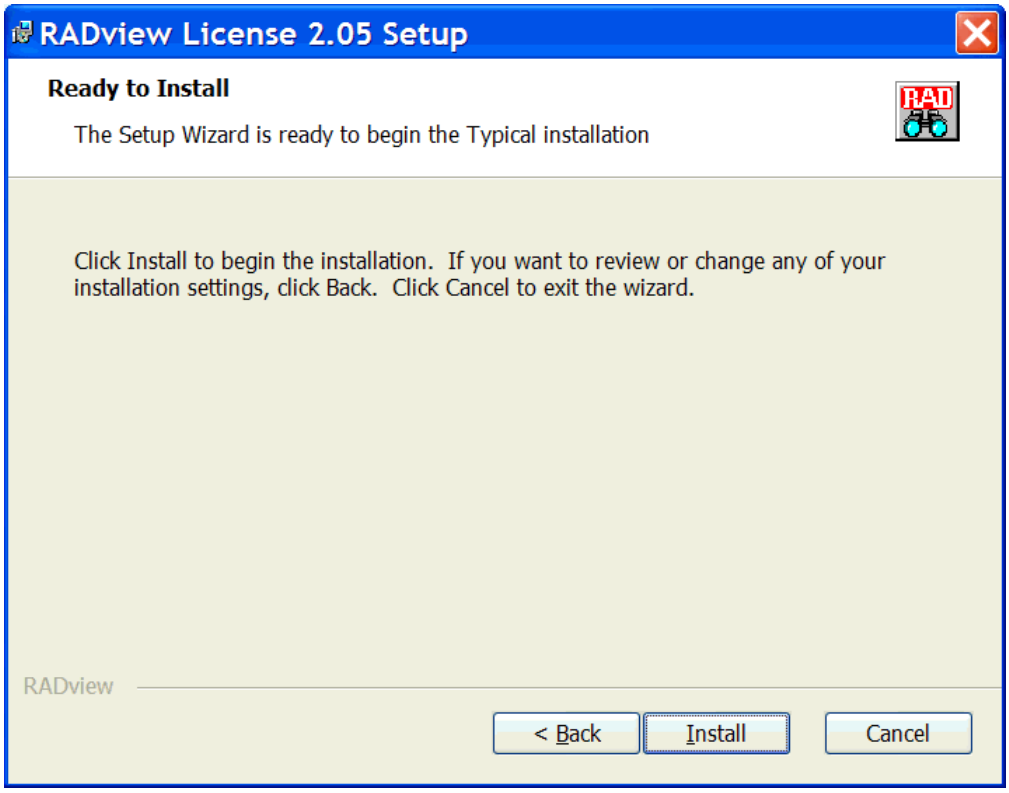
RADview License 2.05 Setup
Ready to Install
The Setup Wizard is ready to begin the Typical installation
Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
RADview
< Back
Install
Cancel

Figure 2-29. Ready to Install License Dialog Box

4. Click **‹Install›** to perform the installation.

   Once all files are installed, the Completing the RADview License Setup dialog box appears.

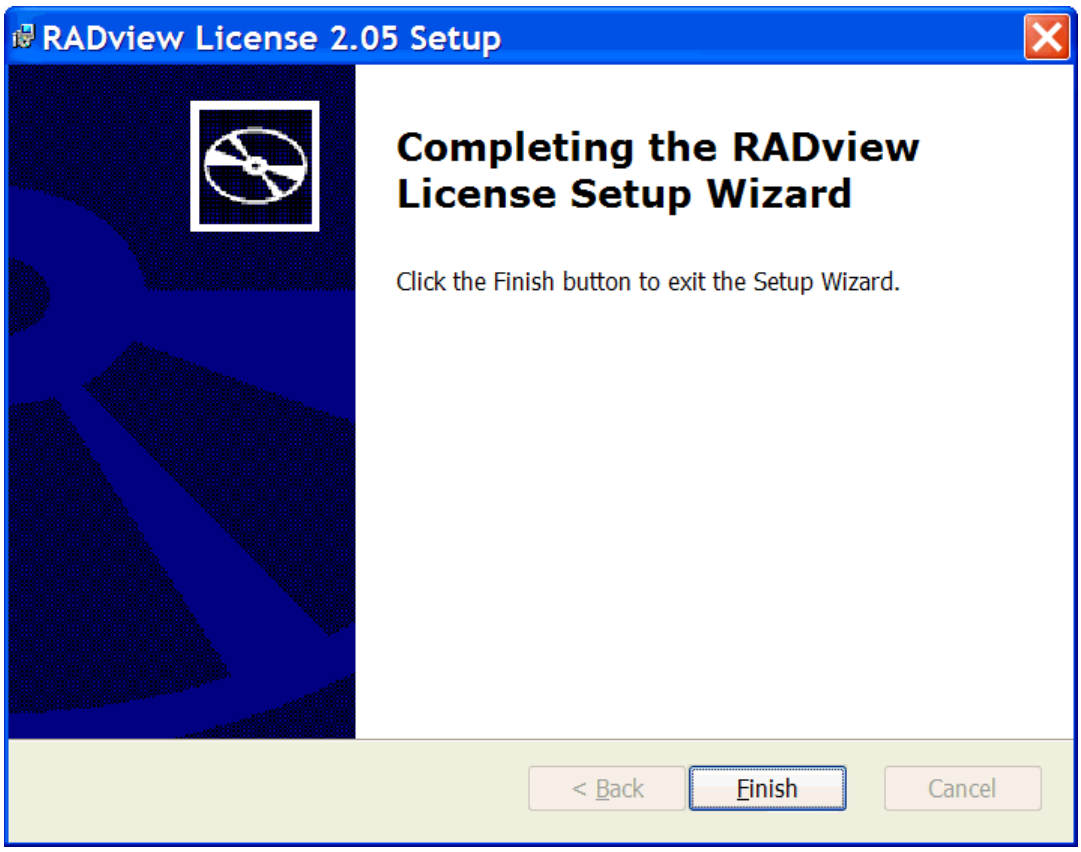

Figure 2-30. Completing the RADview License Setup Dialog Box

5. Click **<Finish>** to complete the installation procedure.

Defining a Remote License Server

This section is relevant only if you have installed the License Server on a remote host other than the one where the License Service Manager is located.

➤ **To define a remote License Server:**

1. Open the License Service Manager by selecting **All Programs>Network Manager>General>License Manager**.
2. Select **Options>Client Side Configuration**.
3. In the Client Side Configuration dialog box, type the IP address of the remote host.

2.3 Post-Installation Steps

Installing Licenses

Each RADview license is associated with a single management station. This station is identified by its IP/MAC address for Windows-based stations or its host ID for UNIX-based stations .

If you need a RADview license for an order that was placed without the IP/MAC address, you can contact the RAD Ordering Department at ordering@rad.com and provide your RADview order number and the IP/MAC address of the management station. The license is then issued and sent to you promptly.

If you need the RADview license to be sent to you again, you can contact the RAD Export Department at export@rad.com and provide your RADview order number or invoice number. The license is then sent to you promptly.

If you do not know for which IP/MAC address to request the license, refer to *Frequently Asked Questions* in *Chapter 7*, or to FAQ 6171 at the RAD Technical Support website.

Note *The Windows station must be connected to the LAN/IP network in order to work with the license.*

To work with RADview-PC/Lite, the license file must be loaded regardless of whether the License server is installed.

➤ **To load the license file:**

1. Open the License Service Manager by selecting **All Programs** › **Network Manager** › **General** › **License Service Manager**.
2. Select **File** › **Add License**.

   The Open License File dialog box is displayed.

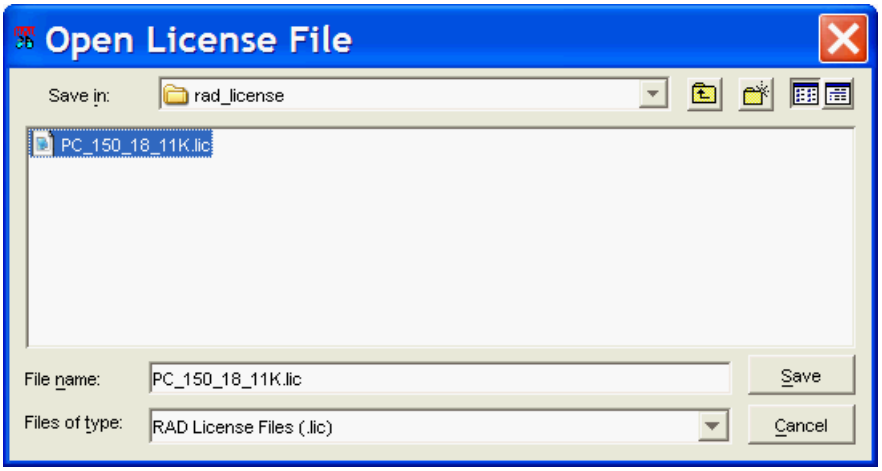

Figure 2-31. Open License File Dialog Box

3. Locate and select the desired license file, and click **<Save>.**

2.4 Uninstalling the RADview Package

Uninstalling RADview-PC/Lite

➤ **To uninstall RADview-PC/Lite:**

1. From the Start menu, select **Settings**›**Control Panel**.

2. From the Control Panel, click **Add/Remove Programs**.
3. From the Add/Remove Programs dialog box, remove all RADview-PC/Lite items in the following order:
   - RADview Lite
   - RADview License
   - RADview Shell.
4. At the end of RADview Shell uninstallation, the Uninstall Complete dialog box appears, prompting you whether to restart the computer.

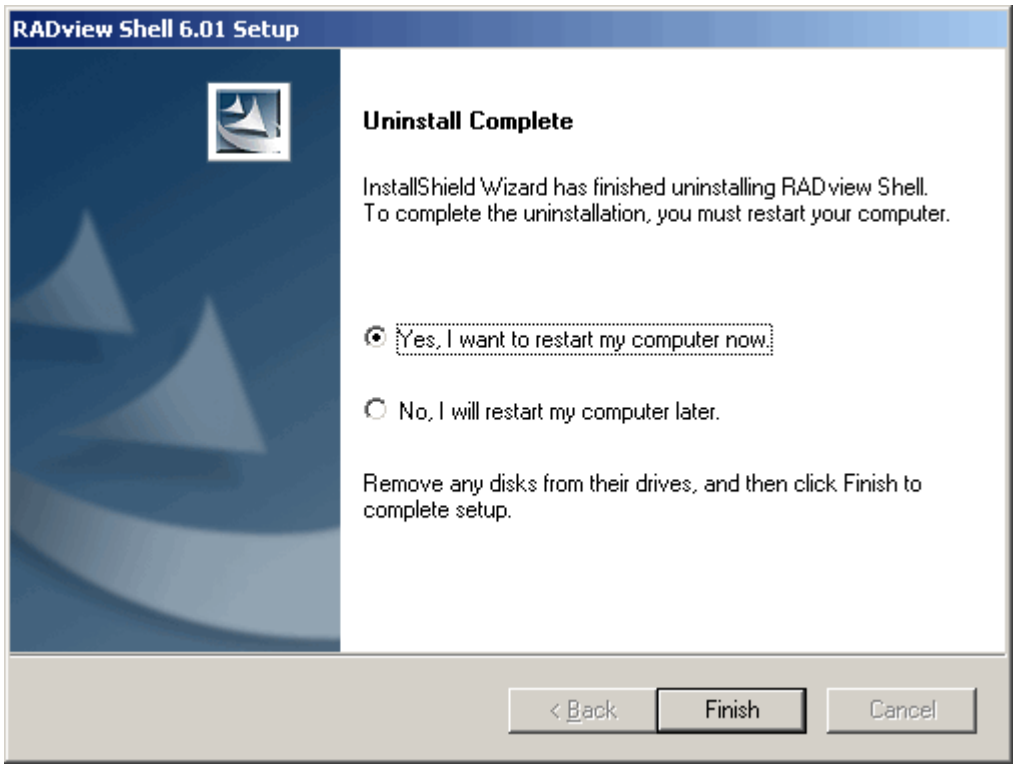
RADview Shell 6.01 Setup
Uninstall Complete
InstallShield Wizard has finished uninstalling RADview Shell.
To complete the uninstallation, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

Figure 2-32. Uninstall Complete Dialog Box

5. Select the option to restart the computer, and click ‹**Finish**› to exit the uninstallation procedure.

   The system reboots.
6. After the system completes its startup, delete the **RV32** folder.

Uninstalling the SNMPc Platform

Note *Before uninstalling SNMPc 7.1, exit the SNMPc management system. Be sure to stop all SNMPc components including the task bar icon.*

➤ **To uninstall the SNMPc Platform:**

1. Select **Start** › **Settings** › **Control Panel** › **Add/Remove Programs**.

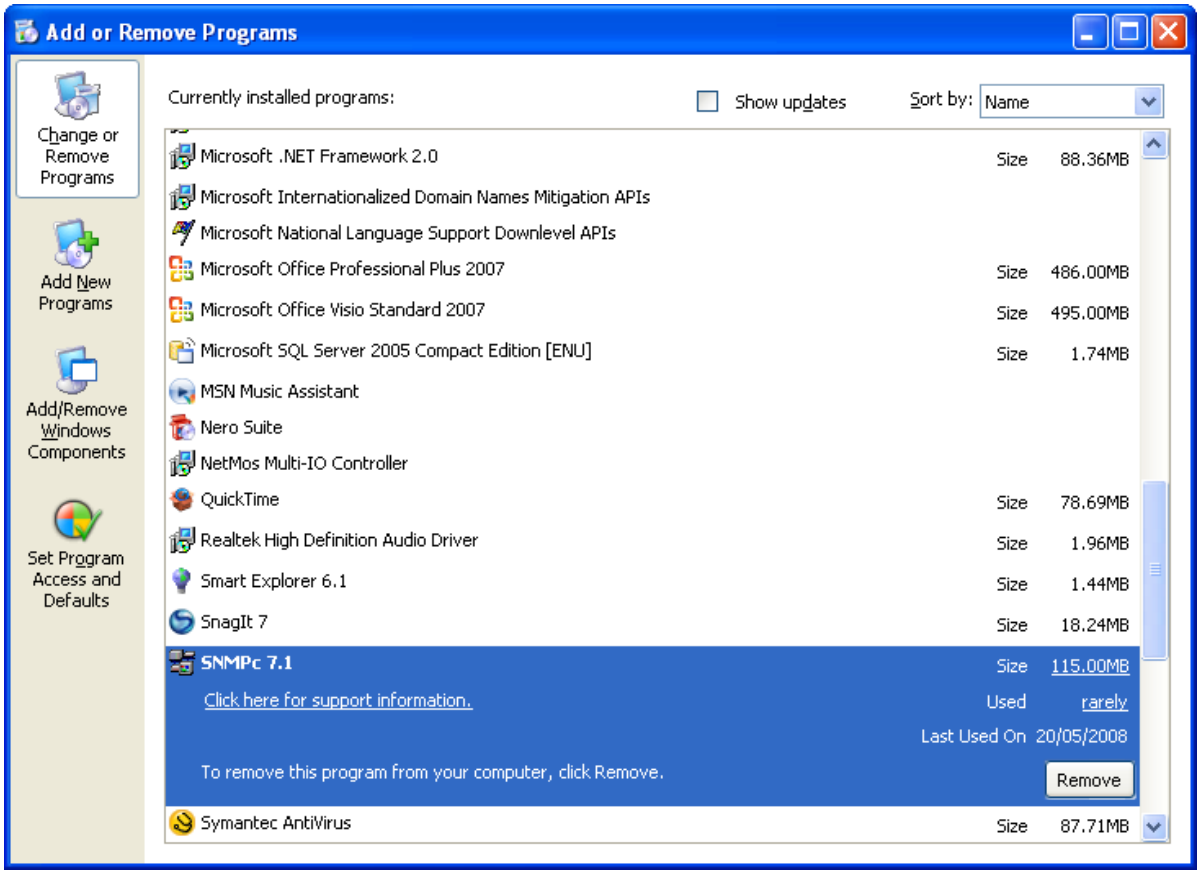
Add or Remove Programs
Change or Remove Programs
Add New Programs
Add/Remove Windows Components
Set Program Access and Defaults
Currently installed programs:
Show updates
Sort by: Name
Microsoft .NET Framework 2.0 Size 88.36MB
Microsoft Internationalized Domain Names Mitigation APIs
Microsoft National Language Support Downlevel APIs
Microsoft Office Professional Plus 2007 Size 486.00MB
Microsoft Office Visio Standard 2007 Size 495.00MB
Microsoft SQL Server 2005 Compact Edition [ENU] Size 1.74MB
MSN Music Assistant
Nero Suite
NetMos Multi-IO Controller
QuickTime Size 78.69MB
Realtek High Definition Audio Driver Size 1.96MB
Smart Explorer 6.1 Size 1.44MB
SnagIt 7 Size 18.24MB
SNMPc 7.1 Size 115.00MB
Click here for support information. Used rarely
Last Used On 20/05/2008
To remove this program from your computer, click Remove.
Remove
Symantec AntiVirus Size 87.71MB

Figure 2-33. Add/Remove Programs

2. Select **SNMPc 7.1** and click < **Remove** >.

The Maintenance Setup dialog box appears.

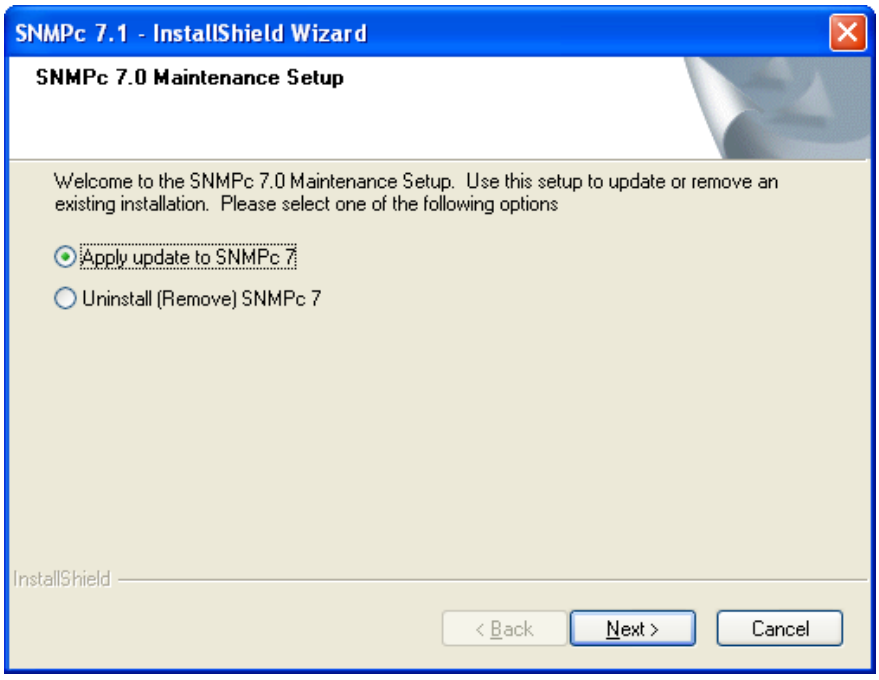
SNMPc 7.1 - InstallShield Wizard
SNMPc 7.0 Maintenance Setup
Welcome to the SNMPc 7.0 Maintenance Setup. Use this setup to update or remove an existing installation. Please select one of the following options
Apply update to SNMPc 7
Uninstall (Remove) SNMPc 7
InstallShield
< Back
Next >
Cancel

Figure 2-34. Maintenance Setup Dialog Box

3. From the Maintenance Setup dialog box select **Uninstall (Remove) SNMPc 7**, and click <**Next**>.
4. A confirmation dialog box appears.

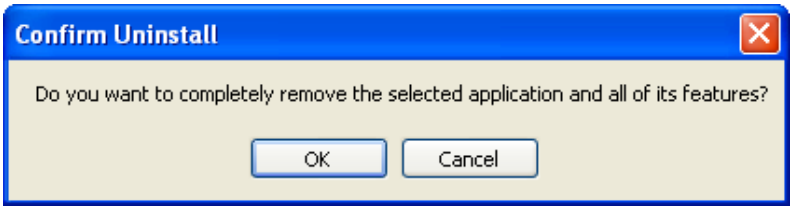

Figure 2-35. Confirm Uninstallation

5. Click <**OK**> to approve the removal.
6. When uninstallation is complete, a dialog box appears confirming that the SNMPc components have been removed.

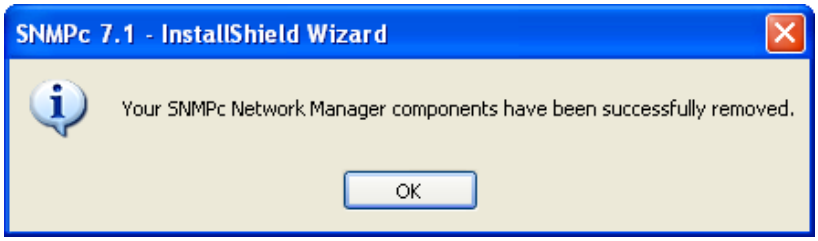

Figure 2-36. Uninstallation Completed

7. Click <**OK**> to close the dialog box.

Chapter 3

Operation

This chapter describes the following operation activities:

- *Launching the SNMPc Platform*
- *Working with RADviewMAP*
- *Using Radview Shell System Functions*.

3.1 Launching the SNMPc Platform

The SNMPc environment provides the platform for RADview-PC/Lite operations.

➤ **To start working with SNMPc:**

1. After you reboot the system after installation and log in to Windows, SNMPc starts automatically. Click ‹**Read Getting Started PDF Now**› to read the *SNMPc Getting Started Guide* if desired. Close the SNMPc Map.
2. To prevent SNMPc from opening automatically, select **All Programs** › **SNMPc Network Manager** › **Configure Tasks**.

   The SNMPc Task Setup dialog box appears (see *Figure 3-1*).

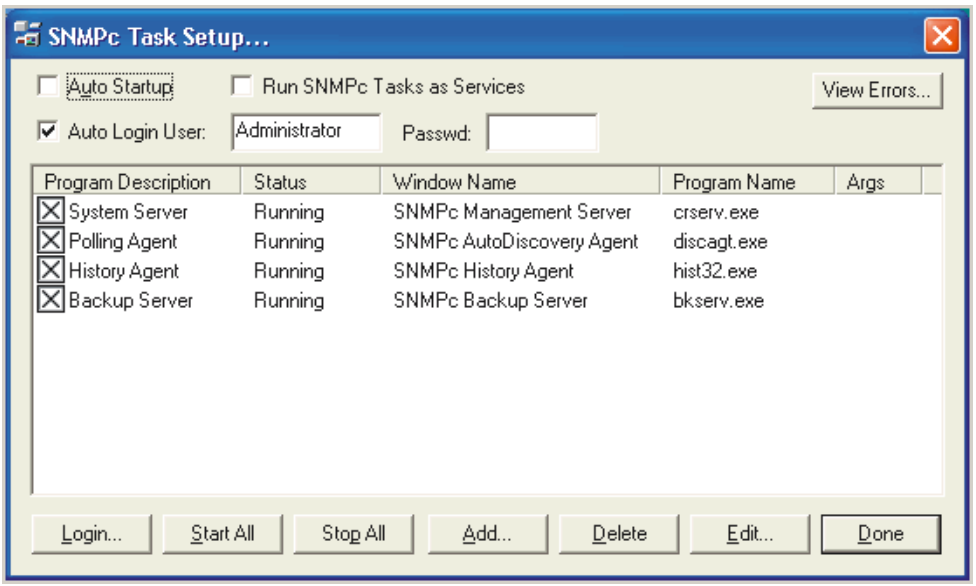

Figure 3-1. SNMPc Task Setup Dialog Box

3. In the **SNMPc Task Setup** dialog box, clear the **Auto Startup** option and click ‹**Done**›.

4. Remove the **Startup System** shortcut from **All Programs** › **Startup**, to ensure that Windows does not perform automatic startup of SNMPc.
5. From the Windows Start menu, select **All Programs** › **Network Manager** › **RADview32** to start RADview-PC/Lite. This automatically opens SNMPc along with RADview-PC/Lite.
6. The first time that RADview-PC/Lite is started and the SNMPc platform opens, the **Welcome to SNMPc Network Management** dialog box appears (see *Figure 3-2*).

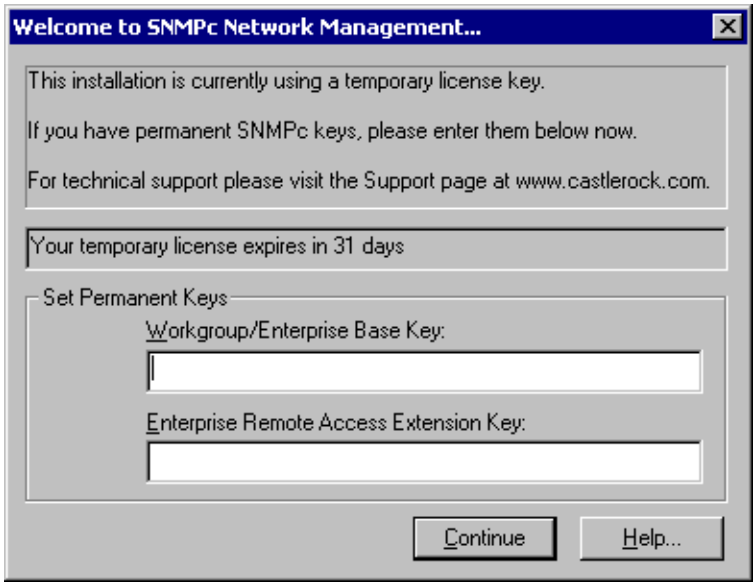
Welcome to SNMPc Network Management...
This installation is currently using a temporary license key.
If you have permanent SNMPc keys, please enter them below now.
For technical support please visit the Support page at www.castlerock.com.
Your temporary license expires in 31 days
Set Permanent Keys
Workgroup/Enterprise Base Key:
Enterprise Remote Access Extension Key:
Continue
Help...

Figure 3-2. Welcome to SNMPc Network Management Dialog Box

7. Enter your **Workgroup/Enterprise Base Key** (SNMPc license number), leave the **Enterprise Remote Access Extension Key** blank, and click ‹**Continue**›

Note

*Your **Workgroup/Enterprise Base Key** is located in the RADview-PC/Lite Package Contents.*

8. Once you enter an upgrade key, the Get Original Key dialog box appears (see *Figure 3-3*).

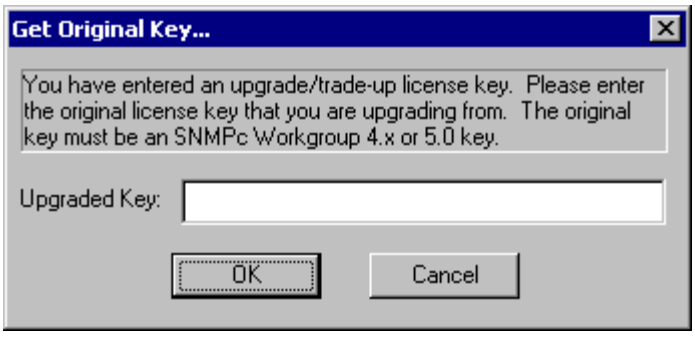
Get Original Key...
You have entered an upgrade/trade-up license key. Please enter the original license key that you are upgrading from. The original key must be an SNMPc Workgroup 4.x or 5.0 key.
Upgraded Key:
OK
Cancel

Figure 3-3. Get Original Key Dialog Box

9. Enter the original 4.x license key, and then click ‹**OK**›.

   The Welcome to SNMPc Network Management dialog box appears again (see *Figure 3-2*).

10. In the Welcome to SNMPc Network Management dialog box, click <**Continue**>.

    The SNMPc Map opens, unless an incorrect upgraded key was specified.

Note

*The MIB compilation is done in the background when opening SNMPc for the first time. You may be prompted to confirm MIB compilation. If so, click <**OK**> to confirm MIB compilation.*

11. After installing SNMPc, the **Server Login** dialog box appears notifying you that you have created one Administrator, with no password.

Figure 3-4. Server Login Dialog Box

12. Click <**OK**> to login.

    The SNMPc Management Console appears (see *Figure 3-5*). The icons of all managed RAD devices are displayed at the top of the screen, and the Trap Log is displayed at the bottom of the screen.

Notes

- *When opening RADview for the first time after installation, the RADview process may exit due to the MIB compilation consuming too much time. If this occurs, select **All Programs > Network Manager->RADview32** again to re-open RADview.*
- *You must install sufficient license points for your system to be able to work with the SNMPc map and RADview applications. Refer to* Chapter 2 *for details on installing the license manager, and* Chapter 4 *for details on licensing.*

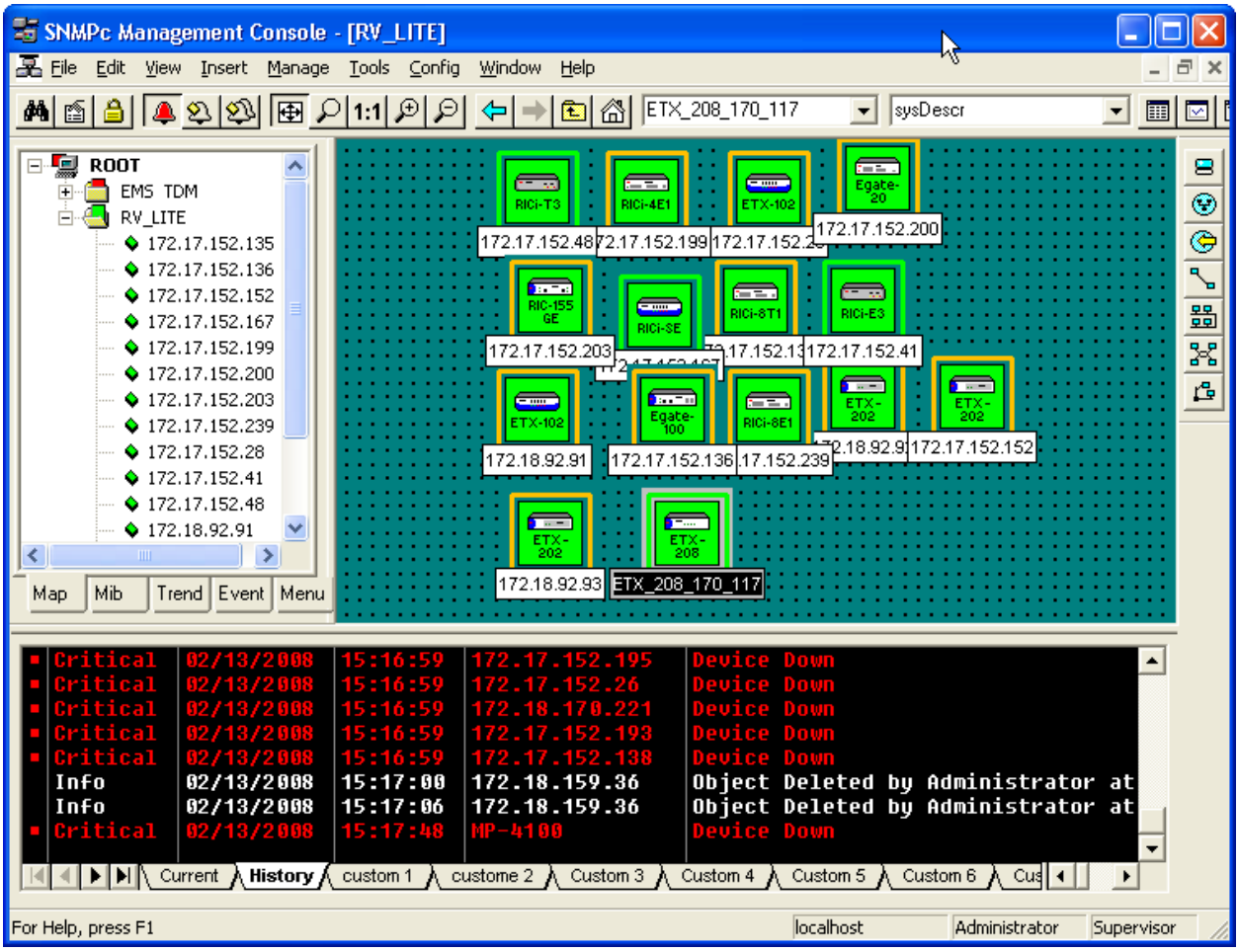

Figure 3-5. SNMPc Management Console

3.2 Using the SNMPc Platform

For a detailed description of the SNMPc graphic user interface (GUI), including instructions on how to configure the SNMPc system and operational parameters, refer to the *Getting Started Guide* that is included in the SNMP package.

When working with an old service pack or when the SNMP Trap service does not exist, traps do not arrive at the workstation or RADview application.

➤ **To resolve the trap problem:**

1. Install **SNMP Service** and **SNMP Trap Service** (Windows Services) if not already installed.
2. Select **Control Panel** > **Services**, and highlight SNMP Trap Service.
3. Set Status to **Started**, and Startup to **Automatic**.

Viewing Network Maps

Hierarchical network maps form the basis of the RADview-PC/Lite network management system.

To view a network hierarchy more easily, you can display several map levels simultaneously. The network map presents status messages and sounds alarms to enable monitoring of the current network status.

Viewing Alarm and Test Status Indications

The color of the icon border (frame color) and the color of the icon (fill color) indicate the status of each managed element, as shown in *Table 3-1*.

Table 3-1. Alarm Status Colors

Color	RADview-PC/Lite (Frame)	SNMPc (Fill)
Green	Normal	Connected with no alarrns and no tests
Cyan	Normal + Test or Warning	Connected with one of the following options: • No alarms and running test/s • Active warning alarms and running test/s • Active warning alarm
Yellow	Minor	Connected with active event alarms or active minor state alarms
Orange		Connected with active major state alarms or faulty state
Red	Major	Disconnected or connected with active critical alarms

3.3 Working with RADviewMAP

When RADview-PC/Lite is installed as standalone, the RADViewMAP application allows you to define the required network elements for the RADview agents.

Note *This section is relevant only if you are not using the SNMPc platform. You can install RADview-PC/Lite as standalone by installing it without installing SNMPc first, and then selecting* ***Standalone application*** *in the Platform Selection dialog box during RADview Shell installation (for more information, refer to* Chapter 2*).*

➤ **To start RADview-PC/Lite as standalone:**

- From the Start menu, select **All Programs** › **Network Manager** › **RADview32**.

  The RADViewMAP window appears.

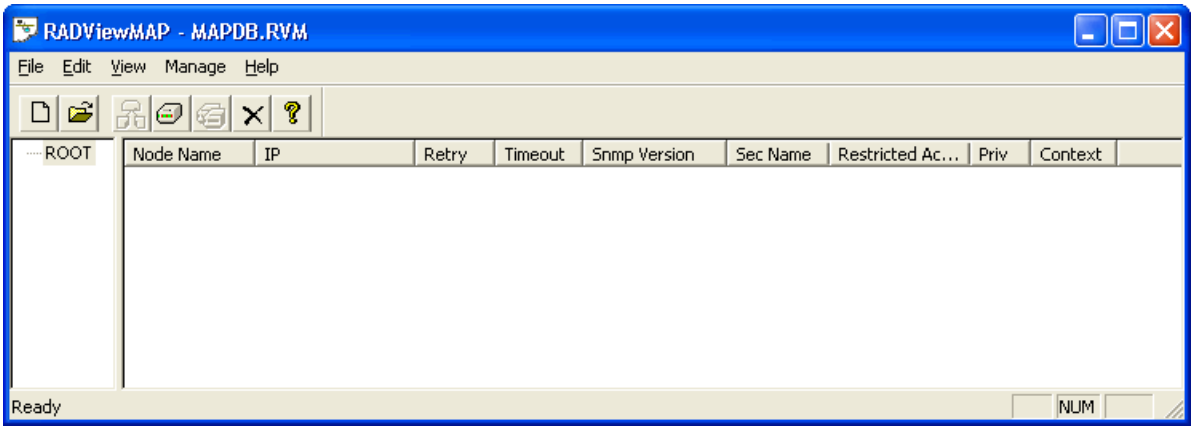
RADViewMAP - MAPDB.RVM
File Edit View Manage Help
ROOT
Node Name IP Retry Timeout Snmp Version Sec Name Restricted Ac... Priv Context
Ready
NUM

Figure 3-6. RADViewMAP - RADview-PC/Lite Standalone

The RADViewMAP application allows you to define Network Elements. The Trap Bar is displayed at the top of the screen.

Note

You must install sufficient license points for your system to be able to work with RADview-PC/Lite applications. Refer to Chapter 2 *for details on installing the license manager, and* Chapter 4 *for details on licensing.*

➤ **To define a Network Element:**

1. From the **Edit** menu, select **Add Node** or click in the toolbar.

   The Add Node dialog box appears.

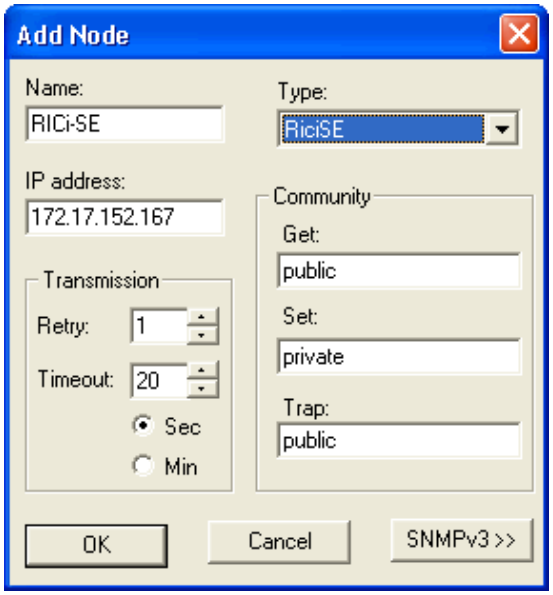

Figure 3-7. Add Node Dialog Box

2. Enter the name of the application in the **Name** field and its IP address in the **IP address** field.
3. Select the relevant **SysObjectID** from the dropdown list in the **OID** field.
4. Enter the community names in the **Community** area and the timeout and retry values in the **Transmission** area.

5. Click <**OK**>.

   The defined object (Network Element) appears in the RADViewMAP window.

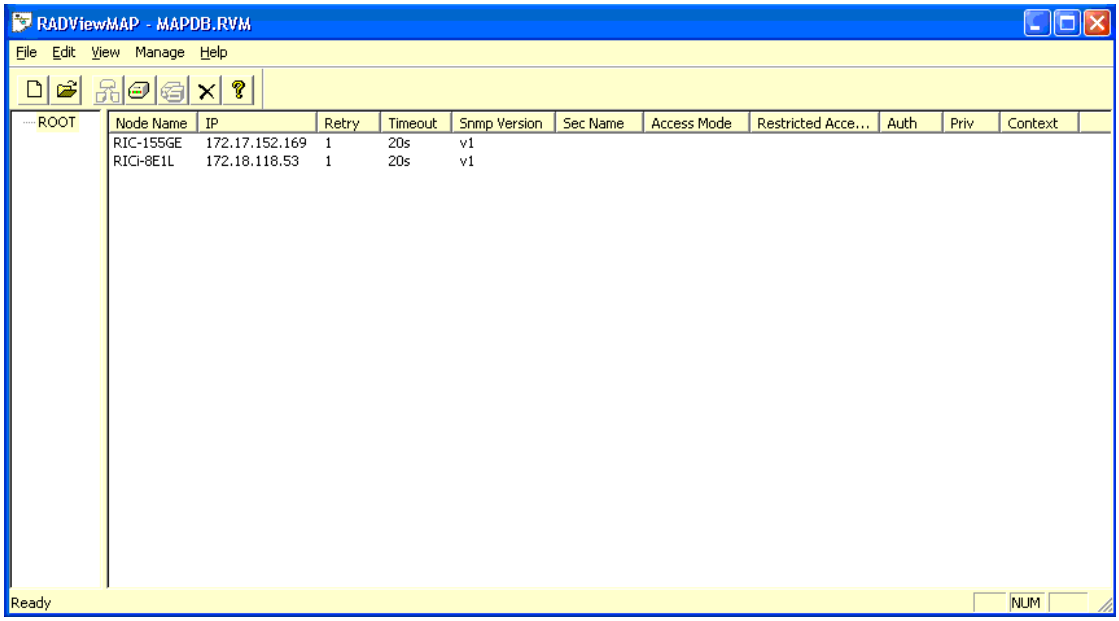
RADViewMAP - MAPDB.RVM
File Edit View Manage Help
ROOT
Node Name IP Retry Timeout Snmp Version Sec Name Access Mode Restricted Acce... Auth Priv Context
RIC-155GE 172.17.152.169 1 20s v1
RICi-8E1L 172.18.118.53 1 20s v1
Ready
NUM

Figure 3-8. RADViewMAP Window Showing Defined Network Elements

6. Double-click on the Node Name of the Network Element in the RADViewMAP window to open ConfiguRAD.

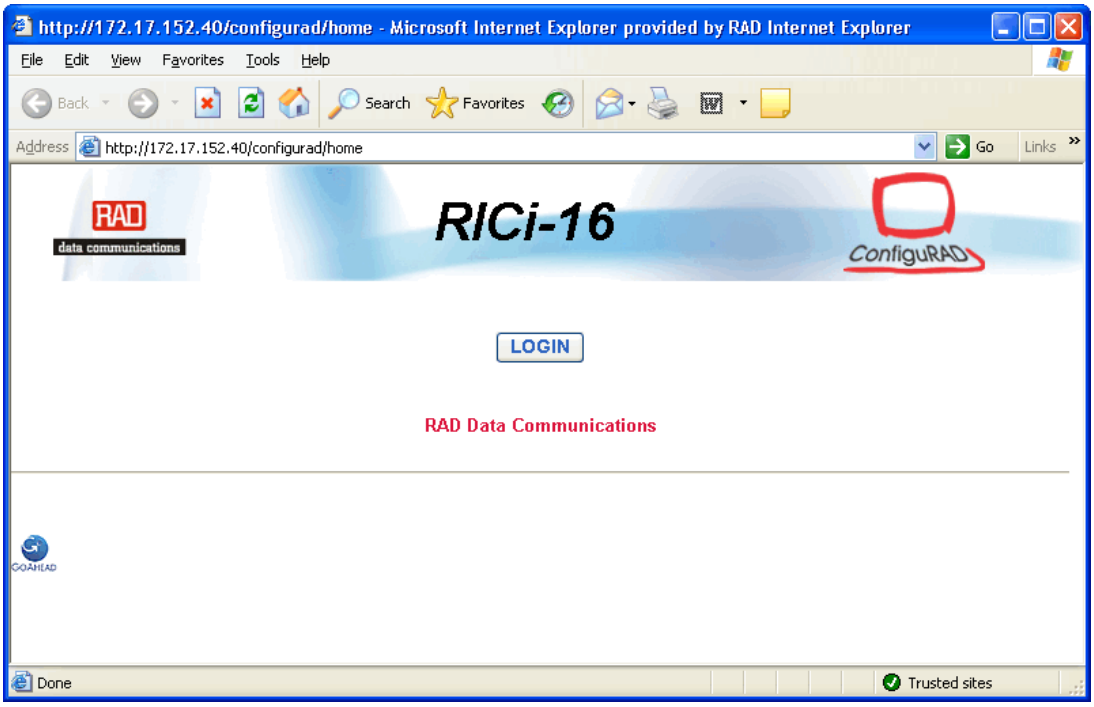

Figure 3-9. ConfiguRAD Opening Window for Network Element

3.4 Using Radview Shell System Functions

This chapter describes the components of the RADview-PC/Lite opening screen, the trap bar, and the RV32 icon.

When starting RADview-PC/Lite, the screen displayed varies according to the mode in which RADview-PC/Lite is running. The following two elements, however, always appear:

- Trap bar
- RV32 icon.

The trap bar is displayed at the top of the screen, and the RV32 icon and the icons corresponding to all managed RAD devices are displayed at the bottom of the screen.

Viewing the PC Shell Information

The trap bar (see *Figure 3-10*) provides details of various events in the system, such as changes in the map or traps, which are received from the managed devices and their connection status.

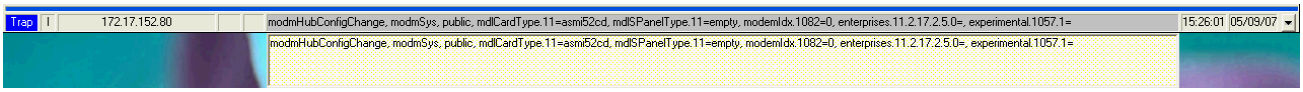
Trap
172.17.152.80
modmHubConfigChange, modmSys, public, mdlCardType.11=asmi52cd, mdlSPanelType.11=empty, modemIdx.1082=0, enterprises.11.2.17.2.5.0=, experimental.1057.1=
15:26:01 05/09/07
modmHubConfigChange, modmSys, public, mdlCardType.11=asmi52cd, mdlSPanelType.11=empty, modemIdx.1082=0, enterprises.11.2.17.2.5.0=, experimental.1057.1=

Figure 3-10. RADview Trap Bar

The information displayed in the trap bar is as follows:

Severity	The severity of the event. **Info**: General information from the map **Err**: Network Element is down or another alert notification arrives from the Map **Trap**: Trap has arrived **Mngr**: NMS-generated trap has arrived
Source	Name or IP address of the device sending the event
Slot/Port	Slot position and port number, if relevant
Description	Brief description of the event. Moving the mouse over this area displays a fuller description.
Time	Current time
Date	Current date
Close	Closes Trap Bar

Events may be map notifications such as *Node Attribute Change*, or platform notifications (traps) such as *Card Status Change*.

General Options

Right-clicking the RV32 icon displays the RV32 menu.

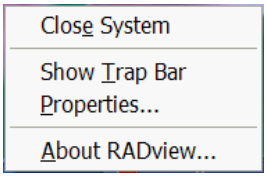

Figure 3-11. RV32 Menu

The menu options are as follows:

- **Close System** – Closes RADview
- **Show Trap Bar –** Displays the Trap Bar if it is closed
- **Properties –** Allows configuration of Radview properties. This option is described in detail in the section on *Viewing and Modifying Radview Properties* below.
- **About RADview –** Provides information about the RADview system.

Viewing and Modifying Radview Properties

The RADview properties dialog box (see *Figure 3-12*) contains configuration settings for the Radview shell. You can view and edit the properties.

➤ **To open the RADview properties dialog box:**

- From the RV32 menu, select **Properties**.

  The RADview properties dialog box appears.

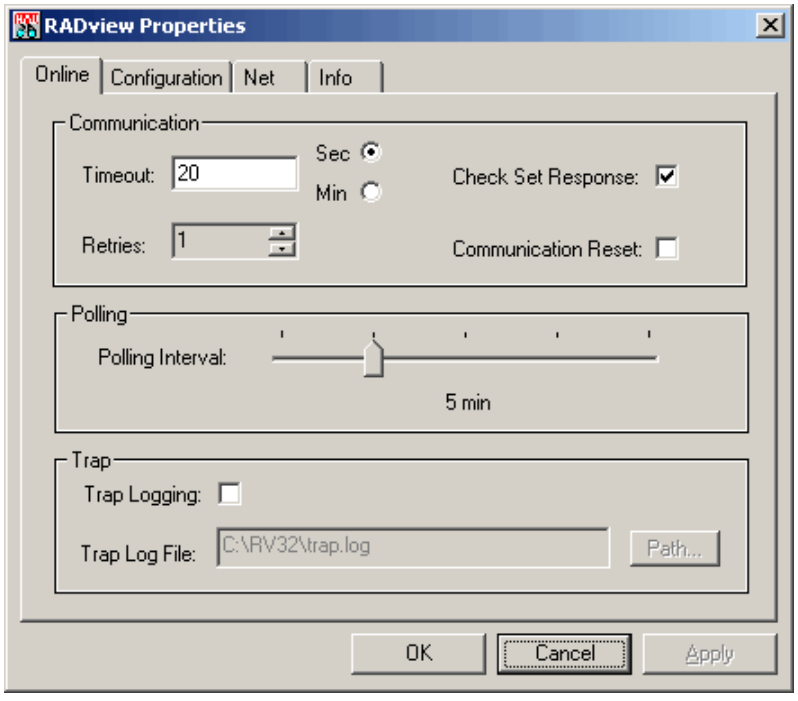

Figure 3-12. RADview Properties Dialog Box

The RADview properties dialog box includes four tabs: **Online**, **Configuration**, **Net**, and **Info**, described in the following sections, and three buttons, as follows:

- **OK**: Saves current parameters and closes the RADview properties dialog box. Any changes made take effect immediately.
- **Apply**: Saves current parameters without closing the RADview Properties dialog box. Any changes made take effect immediately.
- **Cancel**: Closes the RADview properties dialog box without saving any changes, except those that were saved when pressing the <**Apply**> button..

Setting Communication Parameters for Legacy Devices

The **Online** tab allows you to specify communication parameters, modify the polling interval for non-zoomed nodes, and set trap logging.

The parameters of the **Online** tab are listed in *Table 3-2*.

Table 3-2. RADview Properties - Online Tab Parameters

Parameter	Function
Communication	
Timeout	**0** seconds to **99999** minutes, **20 seconds** The length of time, in seconds (**Sec**) or minutes (**Min**) RADview-PC/Lite waits for a response. RADview-PC/Lite compares the **Timeout** value to the timeout parameter specified for the platform and applies the larger value.
Retries	**0**, **1** to **6**, The number of times RADview-PC/Lite resends a request after the timeout period. RADview-PC/Lite compares the **Retries** value to the retries parameter specified for the platform and applies the larger value
Check Set Response	**Checked**, **Unchecked** When checked, a visual response is requested. This prevents you from carrying out any operations in RADview-PC/Lite until confirmation is received.
Communication Reset	**Checked**, **Unchecked** When checked, and you click **Apply** or **OK**, communication is reset with all devices. This is useful if RADview-PC/Lite stops communicating with a connected node. This option is necessary only for HPOV platforms.
Polling	
Polling Interval	**1**, **5**, **10**, or **20** minutes The polling interval for non-zoomed nodes. RADview-PC/Lite performs minimal polling for fundamental information for each managed device.
Trap	
Trap Logging	**Checked**, **Unchecked** When checked, incoming traps (events) are stored in the **Trap Log File**.

Parameter	Function
Trap Log File	Location of the Trap Log File, the default is **C:\RV32\trap.log** When **Trap Logging** is enabled, stores incoming traps. Specify the location or browse to the location using the **Path** button.

Note *When RADview-PC/Lite waits during timeout and retry periods, the cursor changes to a Clock cursor and you cannot perform any other operations. Clicking <**Ctrl**> + <**B**>, <**C**>, or <**I**> returns the cursor to an Arrow and allows you to perform other operations.*

Configuring Legacy Devices

The Configuration tab is used for configuration of RADview-PC/Lite legacy applications. The devices are shown in black and accessible only if they have been zoomed previously.

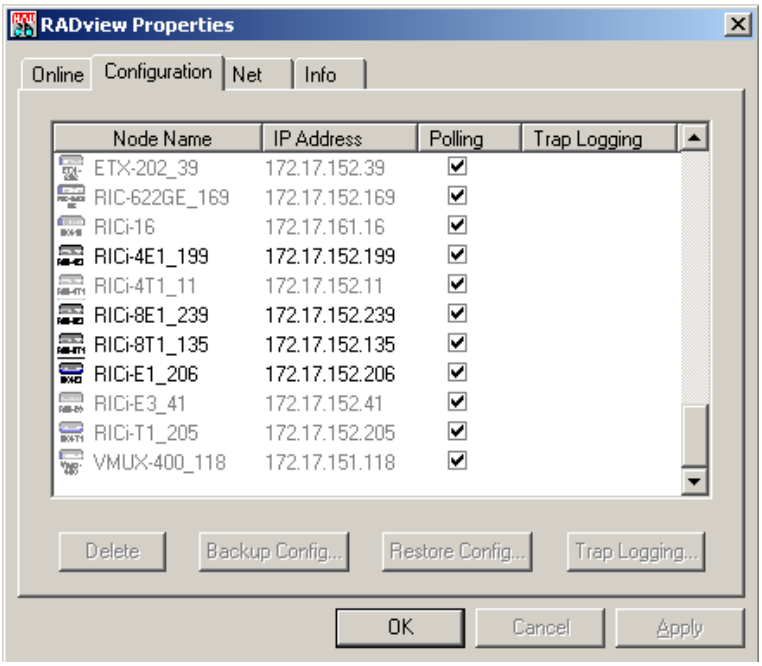

Figure 3-13. RADview Properties Dialog Box - Configuration Tab

Setting the Net Date and Time

The Net tab is used for RADview-PC/Lite applications that support only Net date & time and Net alarms.

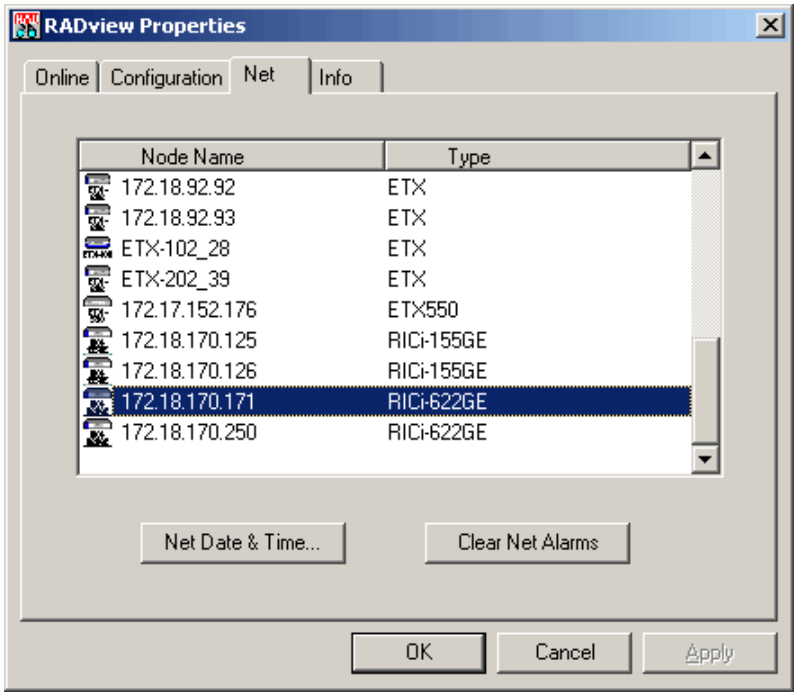

Figure 3-14. RADview Properties Dialog Box - Net Tab

Note *Clicking a column header, for example, Node Name, sorts the list according to that header in ascending order*

Viewing Miscellaneous Radview Information

The **Info** tab displays a Windows-style Explorer dialog box providing information about RADview and currently installed components.

The Info tab displays four information views, as follows:

- **RADview**: Information about the versions of the installed shell and the products

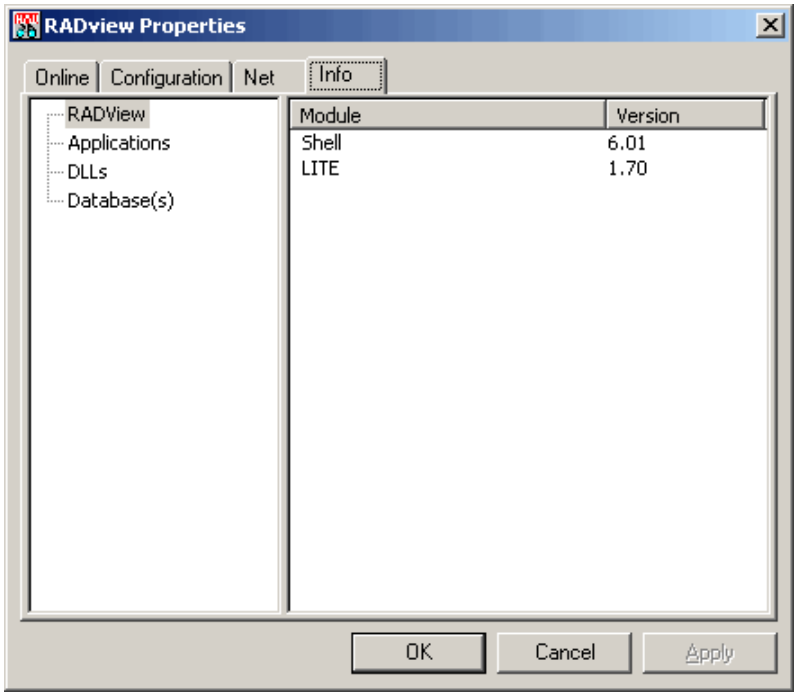

Figure 3-15. RADview Properties Dialog Box - Info Tab, RADview

- **Applications**: Information about currently running applications and their versions

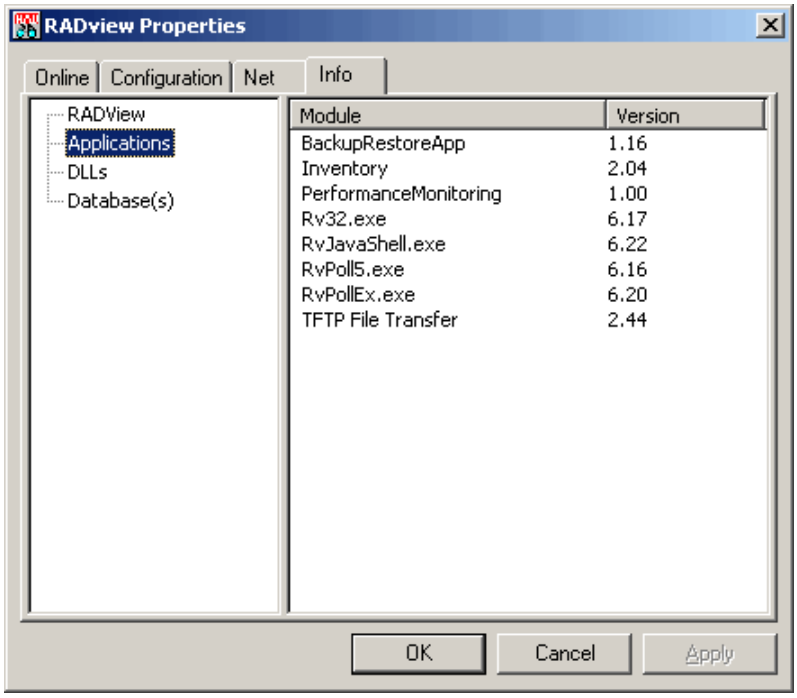

Figure 3-16. RADview Properties Dialog Box - Info Tab, Applications

- **DLLs**: Information about current DLLs and their versions

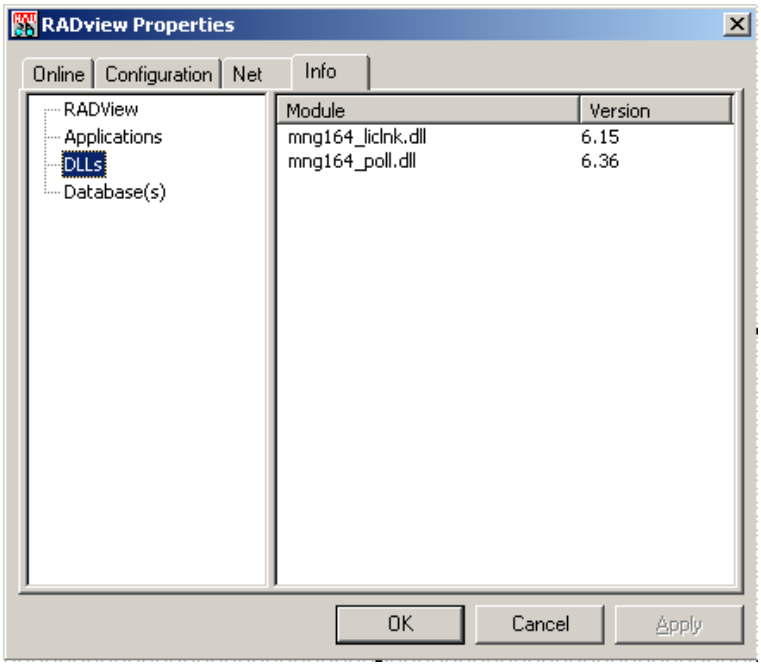

Figure 3-17. RADview Properties Dialog Box - Info Tab, DLLs

- **Database(s)**: Information about the base version and upgrade of the RADview-PC/Lite database.

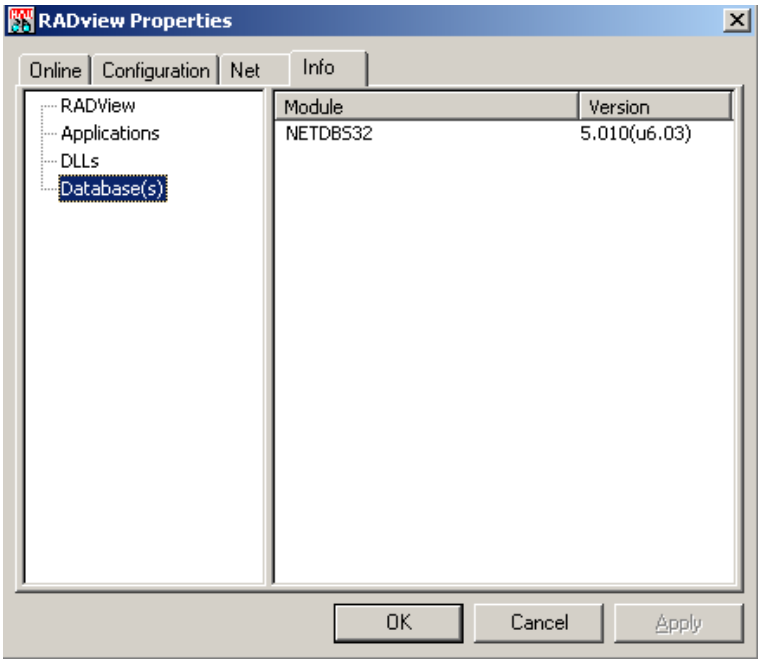

Figure 3-18. RADview Properties Dialog Box - Info Tab, Database(s)

Note *The Info tab is used only for viewing purposes.*

➤ **To close the RADview Properties dialog box:**

- Press ‹**OK**› or ‹**Cancel**›.

Chapter 4

Configuration Management

This chapter describes the following activities:

- *Licensing*
- *Performing Backup and Restore*
- *Transferring Files Using TFTP*
- *Viewing the Net Inventory*.

4.1 Licensing

The RADview-PC/Lite licensing mechanism protects the system by restricting its installation to the specific host for which the license was generated. Product-specific licenses can be ordered in incremental sizes, to allow optimal correlation between the types of managed devices and size of the network, and the price of the management system.

The RADview-PC/Lite licensing mechanism does not restrict or limit simultaneous usage by different users in Client-Server applications (RADview-EMS, RADview-SC/MDM, RADview-SC/TDMoIP or RADview-SC/Vmux), or in UNIX-based systems that are accessed simultaneously by several users via X-terminals (RADview-HPOV).

For full licensing terms, see the RADview-PC/Lite license agreement included in the RADview-PC/Lite package.

Network Size

Each network element managed by RADview-PC/Lite is subject to a license. Modules within a chassis, or non-SNMP devices that are managed by a central RAD SNMP-based unit, are not subject to a license. For example, cards within a DXC-30 chassis or a remote ASMi-52 modem connected to the DXC-30 do not require a license. Only the DXC-30 node requires a license. As another example, consider an LRS-24 modem rack, which allows you to manage not only the modem cards installed in the specific rack, but also the remote modems connected to these cards. In this case, only the LRS-24 requires a license. Standalone managed cards like HTU, HCD, and FOM are subject to a license.

Equivalent Node Weights

Each RAD manageable device is assigned an equivalent node weight (ENW). Different devices are assigned different ENW values according to their complexity (starting from the lowest value of 1). The more complex the device, the higher the ENW. Managing a device with a higher ENW requires a higher number of license points.

Note *A RAD node whose type cannot be identified by the License Server (such as when the device is disconnected or the NMS does not have the correct community name) is assigned a default value of 500.*

Table 4-1 lists the equivalent node weights for RAD devices supported by RADview-PC/Lite.

Table 4-1. Equivalent Node Weights

Device	ENW
APD-8	8
APS-8, APS-16	8
APS-24	8
Egate-20	25
Egate-100	130
FPS-8	8
RIC-155	8
RIC-155GE	10
RIC-622GE	60
RICi-E1/T1	3
RICi-E3/T3	5
RICi-4E1/T1	5
RICi-8E1/T1	7
RICi-16E1/T1	22
RICi-155GE	55
RICi-622GE	60
RICi-SE	3
SPS-4	8
SPS-3S, SPS-6, SPS-12	8
Vmux-400	24

Bundled License Points

Every RADview package includes free-of-charge bundled license points that allow you to manage a small- to-medium-sized network (depending on the actual devices managed by the system). A larger network requires you to purchase and install additional license points, as the network expands.

Table 4-2 lists the RADview Lite packages and their bundled license points.

Table 4-2. Bundled Licenses

Platform	Bundled License Points (Free of Charge)
RADview-PC/Lite	100
RADview-HPOV/Lite	300

Calculating License Points

To determine the number of license points required to manage a given network, perform the following calculation:

- Number of license points (for each type) = (Product type ENW) x (Number of elements of this type).
- When your network consists of different product types, total the number of license points for all product types.

However, since a particular number of license points is bundled within every RADview-PC/Lite package, the actual number of license points required can be calculated as follows:

Required license points = Total Number of License points (for all types) – RADview-PC/Lite package bundled license points

The following is an example of calculating license points for a network to be managed by RADview-PC/Lite, with the following elements:

- One Egate-20 unit
- Four RICi-E1/T1 units
- Two RICi-155GE units.

Referring to the equivalent node weights in *Table 4-1*, we find that:

- Egate-20 = 25 ENW
- RICi-E1/T1 = 3 ENW
- RICi-155GE = 55 ENW.

Referring to the bundled license points in *Table 4-2*, we find that the RADview-PC/Lite package includes a 100-point free-of-charge bundled license.

Thus, the license points you need to order = $\{[25 + (4x3) + (2x55)] - (100)\}$ = 47.

Since the actual license size that is needed to manage the given network is 147, and 100 points are bundled free of charge within the RADview-PC/Lite package, you only need to order 47 additional license points.

To simplify the calculations for larger networks that contain many different products, use the RADview License Calculator. available online at the RAD distributor website.

Working with the License Service Manager

The License Service Manager application is a tool that is used to manage the License Server. The License Service Manager provides the following functions:

- Add/remove license files received from RAD
- Manage installed licenses
- View expiration dates
- View a list of all managed elements in the network, and their most recent access date/time
- View the equivalent node weight (ENW) of managed elements.

➤ **To open the License Service Manager:**

- From the Start menu select: **All Programs**›**Network Manager**›**General**› **License Manager**.

  The License Service Manager opens.

Viewing the Installed License Points

The General tab (see *Figure 4-1* and *Figure 4-2*) allows you to check the potential growth of the system (for adding additional managed elements) by comparing the total installed license points with the consumed license points.

The installed licenses table lists all the installed license files, and includes information on the license size, type of license (permanent or temporary), and host information.

Each entry in the table describes either a license with points or a license for a specific product or feature.

If a temporary license has expired, it is displayed as a red line in the table.

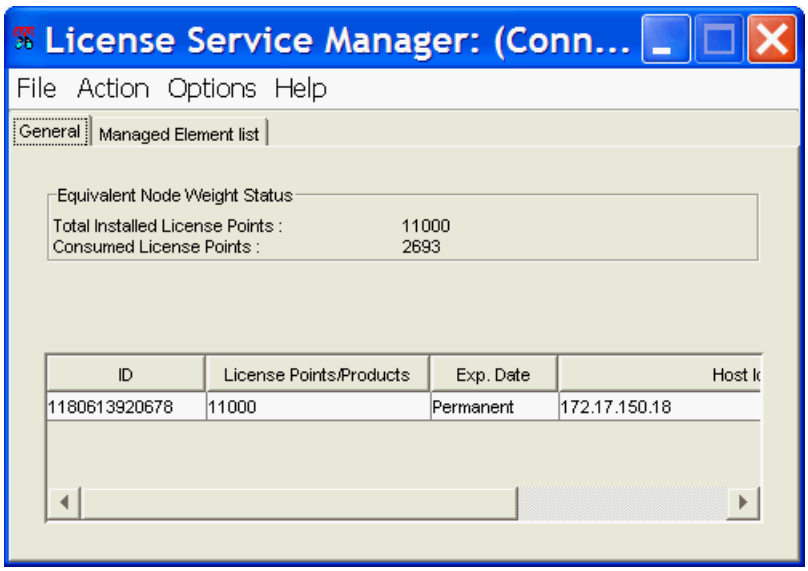

Figure 4-1. License Service Manager – General Tab

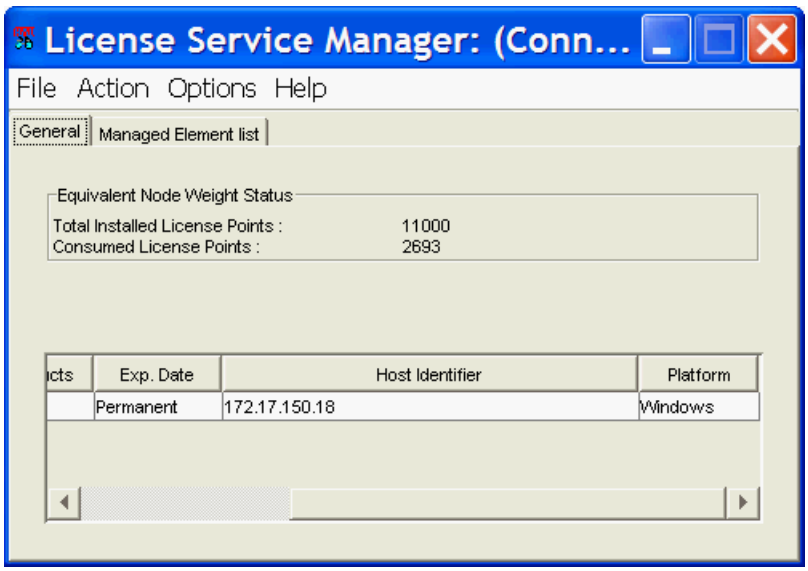

Figure 4-2. License Service Manager – General Tab (Cont.)

Table 4-3. License Parameters

Parameter	Function
Total installed license points	Total license points to which you are entitled (for all valid licenses that have not expired)
Consumed license points	License points that you have already used (for elements managed by RADview-PC/Lite)
ID	Unique identifier given by RAD to a license file
Licnse points/Products	License points included in the license file, or product(s) for which the license is valid
Exp. Date	Expiration date of temporary license, or indication that license is permanent
Host Identifier	Possible values for Windows: IP Address, MAC Address, or Any Host Possible values for Unix: HOST ID, MAC Address, or Any Host
Platform	Platform for which the license was generated (Windows or Unix)

Viewing the Managed Element List

The Managed Element List tab displays all the devices that are managed by RADview-PC/Lite.

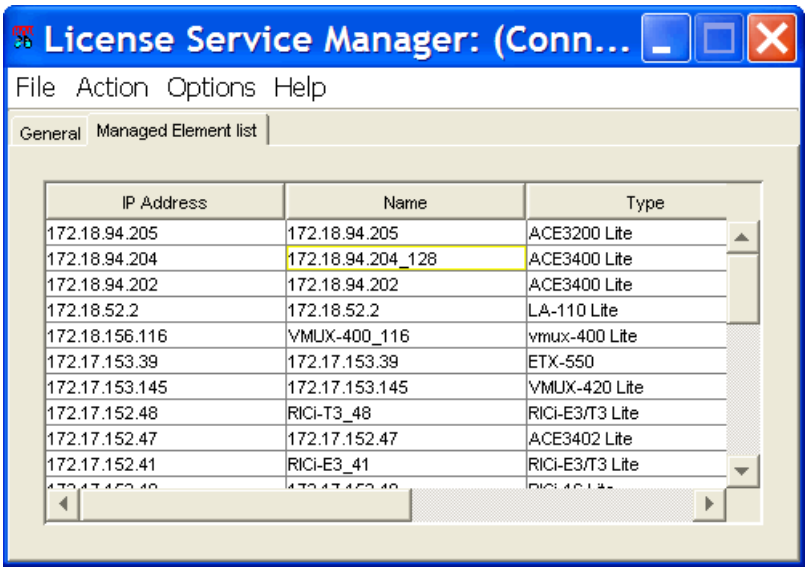

Figure 4-3. License Service Manager – Managed Element List Tab

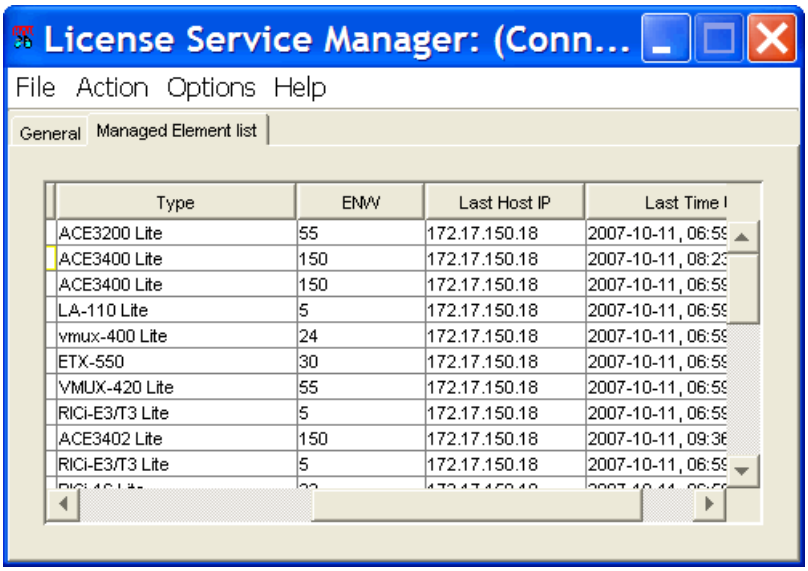

Figure 4-4. License Service Manager – Managed Element List Tab (Cont.)

Table 4-4. Managed Element List Parameters

Parameter	Function
IP Address	IP Address of managed element
Name	Node name of managed element
Type	Type of managed element
ENW	Equivalent node weight of managed element
Last Host IP	IP Address of the last host management station that used managed element

Last Time Used	Last date and time that managed element was used

Note

- *You can manage one agent from different RADview-PC/Lite maps without requiring an additional license. The RADview-PC/Lite license service ensures that different logical representations of the same network element do not require duplicate licenses.*
- *A managed element is deleted from the list when it is deleted from the map of the client. If you delete it while this application is open, the change is not reflected in the Managed Element List until you refresh the entry (**File** > **Refresh**).*
- *By default, the display is ordered by IP Address. You can sort the list by clicking any column.*

Adding a License

➤ **To add a license file:**

1. Display the License Service Manager – General tab.
2. Select: **File** > **Add License**.

   The Open License File dialog box appears.
3. Locate and select the desired license file, and click <**Save**>.

   The data of the new file is added as a new row in the General tab.
4. If the license file already exists, a message is displayed: **`This License already exists`**. Click <**OK**> and select the entry again.

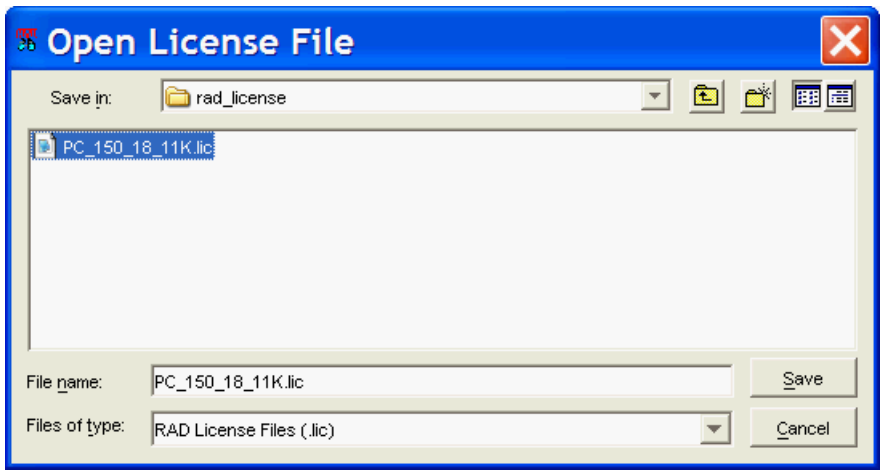

Figure 4-5. Open License File Dialog Box

Removing a License

➤ **To remove a license file:**

1. Display the License Service Manager – General tab.
2. Select one of the rows.
3. Select **File** > **Remove License**.

- If the selected row has a red background, it is removed from the General tab list.
- If the removal of this row causes the Total Installed License Points to be greater than or equal to the Consumed License Points, the row is removed from the General tab list.
- If the removal of this row causes the Total Installed License Points to be less than the Consumed License Points, the following warning message is displayed:

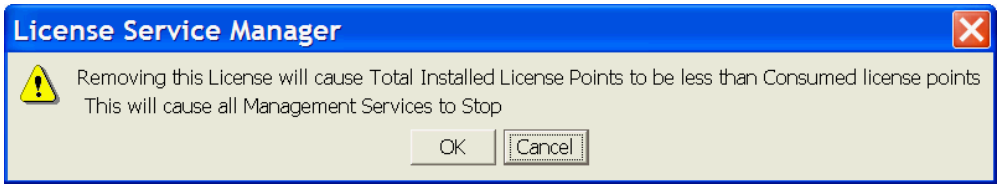
License Service Manager
Removing this License will cause Total Installed License Points to be less than Consumed license points
This will cause all Management Services to Stop
OK
Cancel

Figure 4-6. Remove License Warning

- Click ‹**OK**› to confirm, or ‹**Cancel**› to cancel the removal.

  If you click ‹**OK**›, the row is removed from the General tab list. You cannot continue to use management services until another valid license is added.

Note *Each tab of the License Service Manager must be refreshed separately.*

Starting and Stopping the License Service

The Service Console allows you to start or stop the License Server.

➤ **To start the License Server:**

1. In the License Service Manager, select **Action** › **Service Console**.
2. In the **Service Action** field, select **Start**, and click ‹**Set**›.

   After a polling cycle completes, or after you select **File** ›**Refresh**, the title bar of the License Service Manager displays: **`License Service Manager (Connected)`**.

➤ **To stop the License Server:**

1. In the License Service Manager, select **Action** › **Service Console**.
2. In the **Service Action** field, select **Stop**, and click ‹**Set**›.

   A message is displayed: **`Stopping License Server operation`**.
3. Click ‹**OK**› to confirm.

   After a polling cycle completes, or after you select **File** ›**Refresh**, the title bar of the License Service Manager contains: **`License Service Manager (Disconnected)`**.

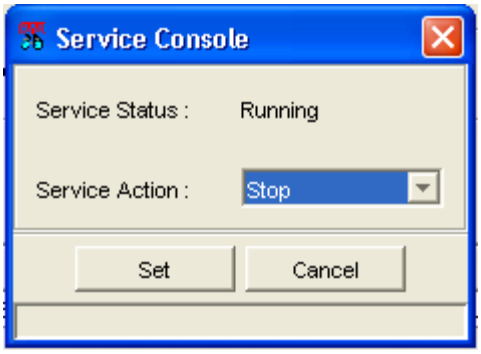

Figure 4-7. Service Console

Configuring the Server Side License Ports

You can configure the Server side and the Client side via the License Service Manager Options menu.

Note

Server Side configuration is applicable only if the Client and Server are installed on the same computer.

➤ **To configure the Server Side:**

1. In the License Service Manager, select **Options** › **Server Side Configuration**.
2. Enter **Socket Port** and **INS Port**.
3. Click ‹**Set**›.

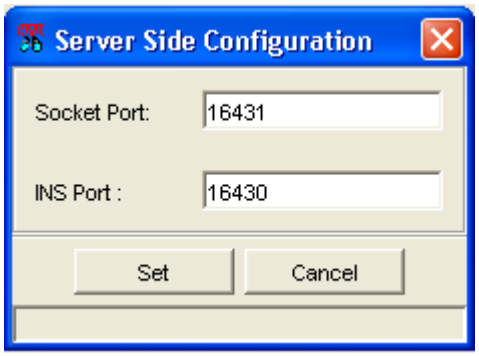

Figure 4-8. Server Side Configuration

Table 4-5. Server Side Configuration Parameters

Parameter	Function
Socket Port	Socket Port of the Server Valid values: ≥ 1000 (blank is not a valid value)
INS Port	INS Port of the Server Valid values: ≥ 1000 (blank is not a valid value)

Configuring the Client Side License Ports

➤ **To configure the Client Side:**

1. In the License Service Manager, select **Options** › **Client Side Configuration**.

2. Select **Server CORBA Mode**, and enter **Socket Port**, **INS Port**, and **Server IP Address**.
3. Click <**Set**>.

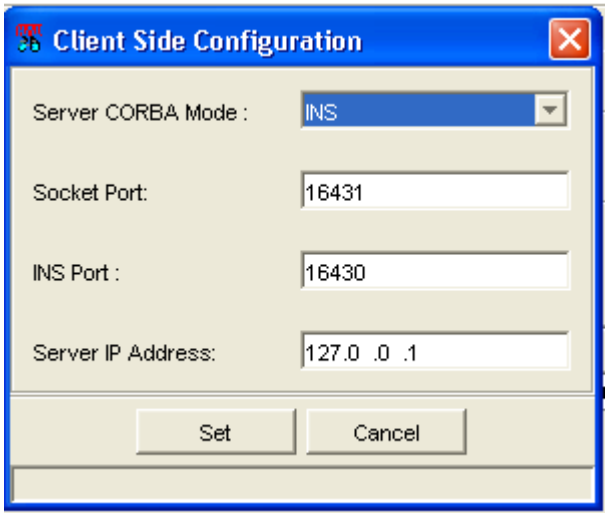

Figure 4-9. Client Side Configuration

Table 4-6. Client Side Configuration Parameters

Parameter	Function
Server CORBA Mode	For future use
Socket Port	Socket Port of the Server Valid values: ≥ 1000 (blank is not a valid value)
INS Port	INS Port of the Server Valid values: ≥ 1000 (blank is not a valid value)
Server IP Address	Server IP Address

Note *A server and all its connected clients must always share the same values in the communication ports fields.*
If you make any changes to the Server Side Configuration, you must restart the License Server for them to take effect.

4.2 Performing Backup and Restore

RADview-PC/Lite system components are backed up and restored by the Backup/Restore scripts. This includes:

- Database backup – backs up the RADview-PC/Lite database.
- RV backup – backs up the RADview configuration files.
- License backup – backs up the RADview-PC/Lite license files.

- Map backup – backs up the SNMPc map contents or RADview-PC/Lite map if RADview-PC/Lite is installed as standalone.

Note *There is no backup and restore support for TFTP files. If you would like to back up TFTP files, refer to* Defining Backup/Restore for Additional Files*.*

You can perform both the backup and restore operations from the same machine or from different machines.

Backup and Restore Requirements

- The Backup and Restore scripts require Informix version 7.3 or higher, or Oracle 10g.
- The same installations of RADview-PC/Lite (packages and products) and Informix (home directory) are required on both the source station and destination stations.

Note *Do not use the Backup and Restore tool with an EMS station and another non-EMS station.*

- The same version of the Backup/Restore scripts should be used in the process (the Restore script verifies this requirement).
- The same version, the same installation, and the same installation directory should be used if Backup/Restore includes data from third-party products used by RADview-PC/Lite (e.g., SNMPc, Informix, Oracle).

Configuring Backup and Restore

Before backing up or restoring files, the parameters in the backup configuration files must be configured. The backup and restore files to be configured are located in the **<RV_PATH>\RV32** directory (where **<RV_PATH>** stands for the directory in which the RADview-PC/Lite package is installed, e.g. **c:\RV32**). The files are:

- **mng164_backup.xml**. This file includes:
  - Information about backup/restore version
  - Configuration parameters for the backup and restore process
  - Parts of the Radview system to be backed up/restored
  - Backup destination directory in which to create the backup files
  - Restore source directory from which to take the restored files.
- **mng164_backup_extra.ini**. This file lists additional files to be backed up in addition to default files.

Setting Parameters in the mng164_backup.xml File

The following sections explain how to configure parameters in the **mng164_backup.xml** file.

Defining the Database Type

You must define the type of database to be backed up/restored.

➤ **To define the database type:**

- Set the values for the following parameters:

Oracle Database	Parameter	Value
	‹ dbtype_oracle ›	true
	‹ dbtype_informix ›	false
Informix Database	**Parameter**	**Value**
	‹ dbtype_oracle ›	false
	‹ dbtype_informix ›	true

Defining Full or Partial Backup/Restore

The backup/restore operation is performed separately for the database, RV, license, and map. Accordingly, you can choose to backup/restore selected system components, or perform a full backup/restore operation.

➤ **To define a full backup/restore:**

1. Open the mng164_backup.xml file.
2. Set the **full_backup/full_restore** value to **true**.

➤ **To define a partial backup/restore:**

1. Open the **mng164_backup.xml** file.
2. Set the **full_backup/full_restore** value to **false**.
3. Set the values of the parts you want to backup/restore to **true** and the values of the unwanted parts to **false**.

➤ **To define the IP address of a station where backup is performed:**

1. Open the **mng164_backup.xml** file.
2. Set ‹**used_ip_address_backup**› to your station's IP address.

➤ **To define the IP address of a station where restore is performed:**

1. Open the **mng164_backup.xml** file.
2. Set ‹**used_ip_address_restore**› to your station's IP address.

Defining the Backup/Restore Location

By default, the backed up files are located in the **‹RV_PATH›\RV32** directory (where **‹RV_PATH›** stands for the directory in which the RADview-PC/Lite package is installed, e.g. **c:\RV32**). You can change the location of this directory by changing its value in the **mng164_backup.xml** file.

Defining Backup/Restore Mode

There are two modes for backup:

- Simple backup
- DateTime backup – based on date and time.

In simple backup mode, during the backup process a new directory named **WORKING** is created in the **<RV_PATH>\RV32** directory (where **<RV_PATH>** stands for the directory in which the RADview-PC/Lite package is installed, e.g. **c:\RV32**). Once the backup is completed successfully, **WORKING** is renamed to **CURRENT**, in accordance with the following conditions:

- If **CURRENT** directory already exists, the old one is first renamed to **PREVIOUS**.
- If any errors occurred during the backup process, the **WORKING** directory is renamed to **PARTIAL**. (If there was already a directory named **PARTIAL**, it is removed.)

In dateTime backup, each backup creates a new directory in the **<RV_PATH>\RV32** directory with a unique name according to the current time and date, e.g. **18-7-2005-11.51.03**. In this mode, the **PARTIAL** directory is not created if an error occurs.

➤ **To define the required backup mode as simple or dateTime:**

- Change the relevant values in the **mng164_backup.xml** file to **true** or **false** according to the required mode.

Defining Backup/Restore for Additional Files

You can use the backup/restore scripts to back up and restore additional files that do not belong to the RADview application and are not backed up by default. The additional backed-up files are compressed into the **mng164_backup_extra.zip** file.

➤ **To enable backup/restore of additional files:**

1. Set the value of the **<extra_restore>** parameter to **true.**
2. Configure the **mng164_backup_extra.ini** file, as explained in the following paragraphs.

To add additional files/directories to be backed up/restored, you must define them in the **mng164_backup_extra.ini** file, located in the **<RV_PATH>\RV32** directory.

Note

*For the extra files to be backed up/restored, the <**extra_restore**> parameter in the **mng164_backup.xml** file must be set to **true**.*

The **mng164_backup_extra.ini** file has a Windows Configuration Settings structure. Each section defines a source directory for backup. Entries are file patterns (or exact names) to be backed up. The Recursive flag specifies whether all files matching the pattern in all subdirectories are to be backed up (**true**), or only files under the main directory.

See the following examples:

Example #1:

[**C:\Documents and Settings**]

Recursive=**true**
TFTP=*.prop

Results in backup of all files with name pattern "*.prop" from the **C:\Documents and Settings** directory and all its subdirectories.

Example #2:

[**C:\WINDOWS**]

Recursive=**false**
TFTP=*164*.*

Results in backup of all files with the name pattern "*164*.*" from the **C:\WINDOWS** directory only.

Backing Up System Components

The **mng164_backup.xml** file must be a legal configuration file with correct syntax, otherwise the scripts might not work properly.

➤ **To run the backup process:**

1. Verify that the backup destination full path is defined in the **mng164_backup.xml** file.
2. Verify that SNMPc is open, when backing-up the map.
3. If there is already a directory named **PARTIAL** or **CURRENT** in the backup destination directory, verify that none of the files in this directory are open.
4. Run the backup as follows:
   - Using Windows menu:
     a. From the Start menu, select All Programs› Network Manager› General› BackupRestore› Backup.

        The following confirmation message appears:
        `Do you want to start a backup process y/n?`

     b. Type **y** to continue.
   - Running from command line:
     - Use the following command (write on one line):
       `>%windir%\system32\cscript.exe //Nologo RV_PATH\BackupRestore\mng164_backup.wsf SILENT_MODE:y`
5. Once the backup operation is completed, two files are located in the relevant directory according to the backup mode. One file is a compressed file containing all the backed-up data (**mng164_backup.zip**), and the second is the backup log file (**mng164_backup.log**). If the backup was successful, the **WORKING** directory is renamed to **CURRENT**.
6. Read **mng164_backup.log** carefully to verify that there were no warnings/errors during the backup process.

Restoring System Components

Note

Before running the restore script, check that:

- *The directory of the **mng164_backup.zip** source file is compatible with the **restore_source** value in the **mng164_backup.xml** file. Change the value if needed according to the source directory.*
- *The backup log file indicates that all the parts you want to restore were backed up successfully. Otherwise, the script exits with an error message.*

➤ To run the restore process:

1. Close RADview-PC/Lite as follows:
   - If working with RADview-PC/Lite standalone:
     a. Close RV32 by right-clicking the RV32 taskbar icon and selecting **Close System**.
     b. Close RADViewMap standalone map if it is installed.
   - If working with RADview-PC/Lite based on SNMPc platform, close the SNMPc map.
2. Close any ConfiguRAD windows.
3. Stop any existing Service-Center server (TDMoIP, VMUX) if it is running on the station.
4. Run the restore as follows:
   - Using Windows menu:
     a. From the Start menu, select **All Programs› Network Manager › General › BackupRestore› Restore**.

        The following confirmation message appears:
        `Do you want to start a restore process y/n?`

     b. Type **y** to continue.

        An additional confirmation message appears:
        `Restore will overwrite your current data. Do you want to continue y/n ?`

     c. Type **y** to continue.
   - Running from command line:
     - Set the value of ‹**confirmation_needed**› in **mng164_backup.xml** file to **false** and type this command (write in one line):
       `>%windir%\system32\cscript.exe //Nologo RV_PATH\BackupRestore\mng164_restore.wsf SILENT_MODE:y`

Caution

The restore process may take a few minutes. Let the process run until it completes. Stopping the restore process while it is running may cause database corruption and other problems.

5. After the restore operation is completed, the restore log file (**mng164_restore.log**) is placed in the source directory. Read

mng164_restore.log carefully to check that all the selected parts were successfully restored.

Note *License restore can only be performed on the same station where the backup process was performed.*

4.3 Transferring Files Using TFTP

Note *You do not have to use the RAD TFTP file transfer utility. You can use any other utility, such as 3Cdaemon (available from www.3com.com) or PumpKIN (available from http://kin.klever.net/pumpkin/). If you use the RAD TFTP file transfer utility, you also need to install a TFTP server on the RADview workstation.*

TFTP File Transfer is a RADview system application. The TFTP File Transfer application provides you with a tool for upgrading software embedded in RAD devices, or performing upload/download of device configuration. The TFTP File Transfer application is based on the following principles:

- TFTP protocol is used for file transfer
- The agent acts as a TFTP client, while the TFTP server is installed on the host
- The application manages multiple downloads to several agents at the same time according to the date and time settings
- During the TFTP process, the agent sends traps to the NMS to indicate the download status.

Opening the TFTP File Transfer Application

➤ **To start the TFTP File Transfer application:**

- From the **Start** menu select **All Programs** › **Network Management** › **General** › **TFTP File Transfer**.

  The TFTP File Transfer window appears.

Figure 4-10. Opening TFTP File Transfer Menu

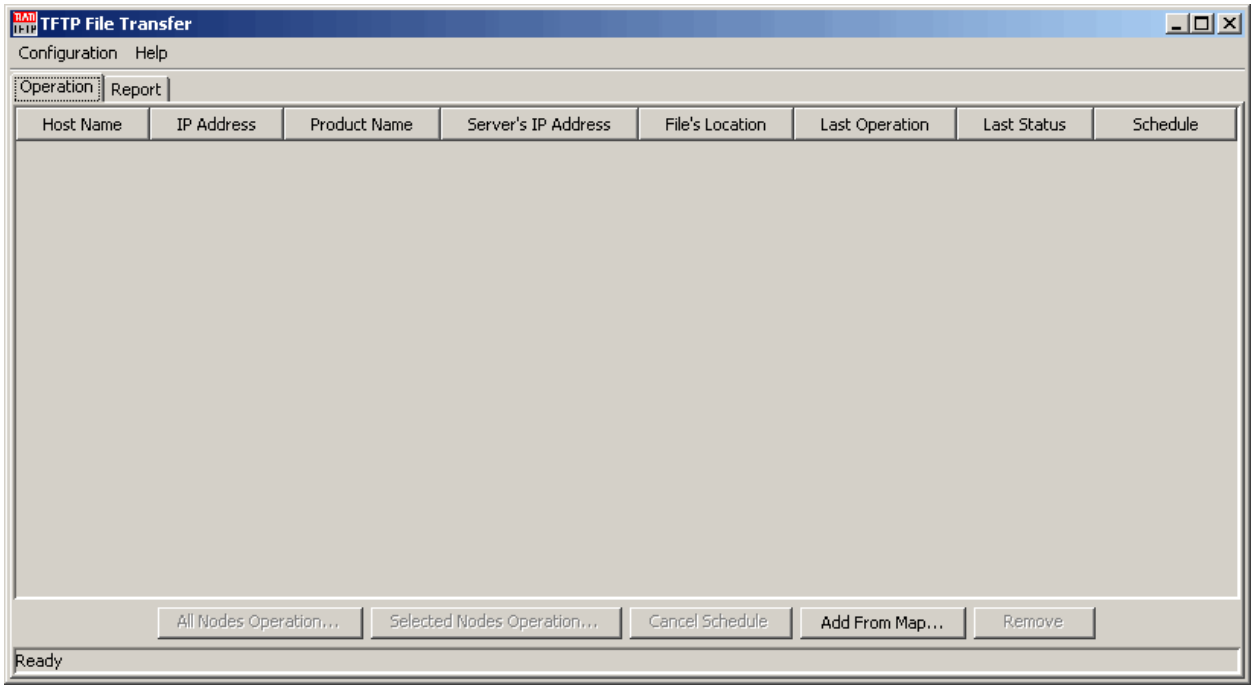

Figure 4-11. TFTP File Transfer Window

When using the TFTP File Transfer application for the first time, the initial configuration includes the following procedures:

- Defining agents and associated download data in the TFTP database (see *Editing the TFTP Database*)
- Adding agents from the map to the TFTP operation list (see *Adding Agents for TFTP Operations*)
- Selecting agents in the TFTP Operation tab for immediate or scheduled download, then reviewing the operation details (see *Transferring Files Using TFTP*)
- Checking the report details in the Report tab (see *Viewing TFTP File Transfer Reports*).

Changing the TFTP Default Settings

To configure the TFTP default settings, you use the configuration menu.

Figure 4-12. Configuration Menu

➤ **To change the TFTP default settings:**

1. From the Configuration menu, select **Default Settings**.

   The Default Settings dialog box appears (see *Figure 4-13*).

2. Configure the default settings parameters as specified in *Table 4-7*.
3. Click ‹**Set**›.

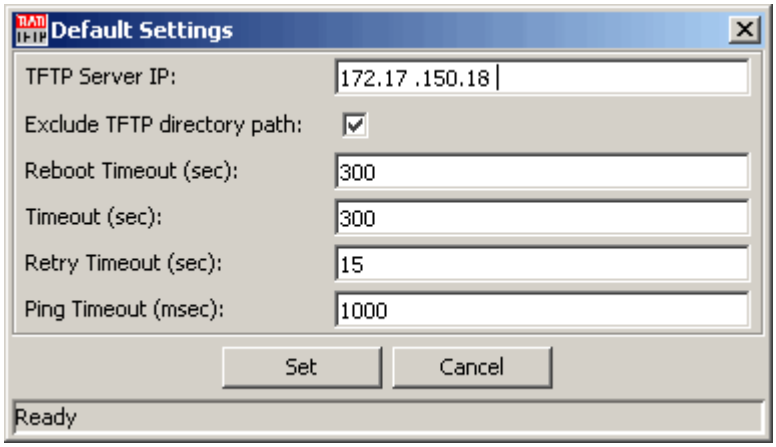

Figure 4-13. TFTP Default Settings Dialog Box

Table 4-7. TFTP Default Parameters

Parameters	Function
TFTP Server IP	The IP address of the TFTP server for the selected object.
Exclude TFTP Directory Path	Selected, Cleared Default Value: **Selected**
Reboot Timeout (sec) (10–4000 seconds)	The reboot timeout setting for the selected object. The TFTP File Transfer application waits for this period for the Cold Start trap after performing a reboot. Default value: **300 seconds**
Timeout (sec) (10–4000 seconds)	Default value: **300 seconds**
Retry Timeout (sec)	Default value: **15 seconds**
Ping Timeout (msec)	Default value: **1000 milliseconds**

Editing the TFTP Database

The Edit Database dialog box (see *Figure 4-14*) allows you to add, modify, or remove products. The dialog box displays the OIDs (Object IDs) of the product types stored in the TFTP database.

Adding a Product Profile

➤ **To add a new product:**

1. From the Configuration menu select **Edit Database**.

   The Edit Database dialog box appears (see *Figure 4-14*).

2. Click ‹**Add**›.

   The Add Product dialog box appears (see *Figure 4-15*).

3. Fill in the fields as specified in *Table 4-8*.
4. Define the **S/W Download file**. There are two methods:
   - In the **S/W Download File** field, type the name of the **S/W Download File**. There is no need to specify the full path, just the file name.

     Or

   - Follow the procedure in *Selecting the File to Download*.
5. Click ‹**Set**›.

   The message **`Database saved`** appears at the bottom of the screen.
6. In the **Edit Database** dialog box, click ‹**Close**›.

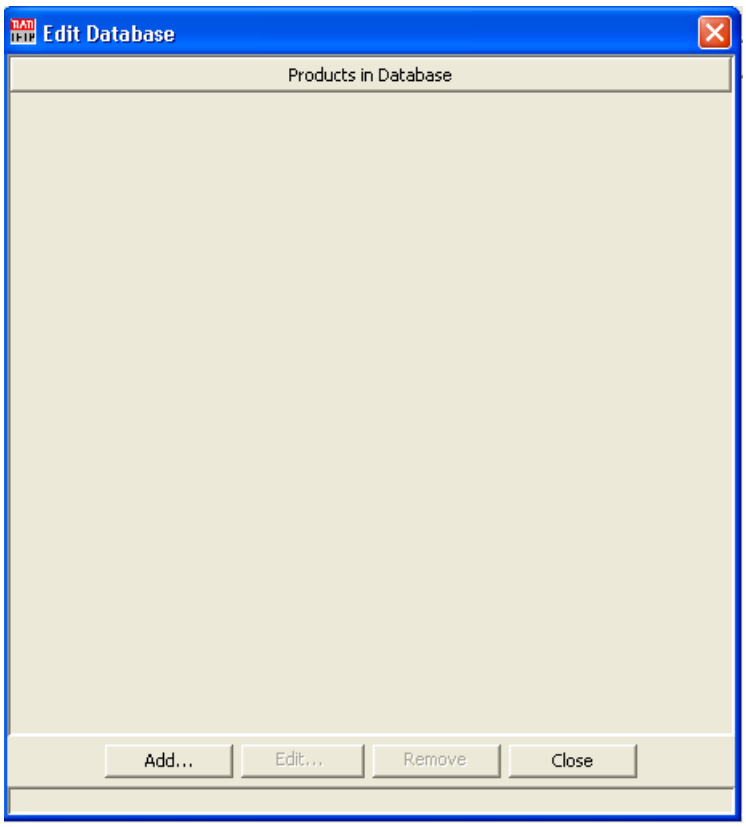

Figure 4-14. Edit Database Dialog Box (Before Products Added)

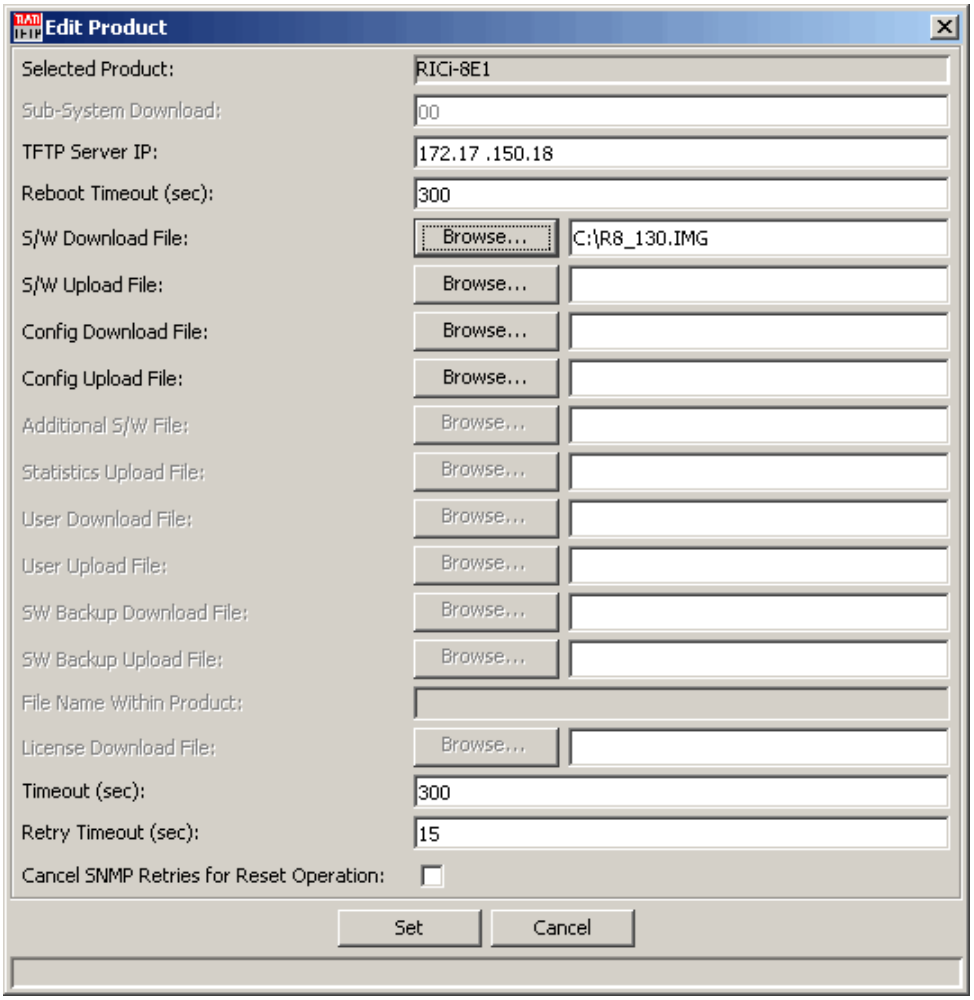

Figure 4-15. Add Product Dialog BoxTable 4-8. Add/Edit Product Parameters

Parameter	Function
Select Product	The object ID (product type) of the selected product
SubSystem Download	Indicates whether this feature is needed for the selected product, and the subsystems needed for download
TFTP Server IP	The IP address of the TFTP server for the selected product
Reboot Timeout (sec)	The reboot timeout setting for the selected product The TFTP File Transfer application waits for this period for the Cold Start trap after performing a reboot
	All the following fields except the last two fields are enabled only if the product(s) selected via the Selected (All) Nodes field support(s) the field
S/W Download File	The S/W Download file path and name on the TFTP server for the selected product. The S/W Download ‹**Browse**› button opens a standard Open File dialog box for locating the TFTP File Transfer file

Parameter	Function
S/W Upload File	The S/W Upload file path and name on the TFTP server for the selected product. The S/W Upload ‹**Browse**› button opens a standard Open File dialog box for locating the TFTP File Transfer file
Config Download File	The configuration download file path and name on the TFTP server for the selected product. The ‹**Browse**› button opens a standard Open File dialog box for locating the TFTP File Transfer file
Config Upload File	The configuration upload file path and name on the TFTP server for the selected product. The ‹**Browse**› button opens a standard Open File dialog box for locating the TFTP File Transfer file ***Note**: In Config. Upload there is no need to select Reset Only*
Additional S/W file	The product's Software Download file path and name on the TFTP server for the selected product. The ‹**Browse**› button opens a standard Open File dialog box for locating the TFTP File Transfer file ***Note**: This parameter is not relevant for all products*
Statistics Upload File	The product's statistics upload file path and name on the TFTP server for the selected product. The ‹**Browse**› button opens the Select File to Download dialog box for locating the TFTP File Transfer file ***Note**: This parameter is not relevant for all products*
User Download File	The product's user download file path and name on the TFTP server for the selected product. The ‹**Browse**› button opens the Select File to Download dialog box for locating the TFTP File Transfer file ***Note**: This parameter is not relevant for all products*
User Upload File	The product's user upload file path and name on the TFTP server for the selected product. The ‹**Browse**› button opens the Select File to Download dialog box for locating the TFTP File Transfer file ***Note**: This parameter is not relevant for all products*
SW Backup Downlzoad File	The software file to download when backup is required
SW Backup Upload File	The software file to upload when backup is required
File Name Within Product	The product file name uses any file name from the file system list (depending on the user). This field is applicable mainly for the User Download File, User Upload File, and Statistics Upload File options ***Note:** User must enter file name*
License Download File	License file location

Parameter	Function
Timeout (sec)	The time when a break automatically occurs when a predefined interval of time has passed. See *Table 4-9* for default value for the particular product.
Retry Timeout (sec)	Retry between the specified number of attempts. See *Table 4-9* for default value for the particular product.
Cancel SNMP Retries for Reset Operation	If the Set Response for the Reset command is not received by NMS (lost), the NMS sends the Reset command (SNMP retry) again. This retry resets the redundant card as well, causing services to stop for a period of time. In order to avoid loss of service, the user can cancel the retries (this is the default setting for the devices with this problem). Default: Unchecked

The TFTP file transfer application provides a number of functions, listed in *Table 4-9*.

Some RAD products do not support all the download options offered by the TFTP file transfer application. Also, some RAD products may have recommended settings for TFTP variables that are specific for their application. Refer to *Table 4-9* for the TFTP File Transfer options and recommended TFTP values that are relevant for your product.

Table 4-9. TFTP File Transfer Options – by Product

Product Name	Reboot Timeout (sec)	SW Downld	Config Downld	Config Upld	Additional SW Downld	Statistics Upld	User Downld	User Upld	File Name Within Product	Timeout (sec)	SW Upld	SW Downld to Bkp & Swap Main and Bkp SW	SW Upload from Bkp	License Downld	Subsys Downld
APD-8	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
APS-8	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
APS-16	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
APS-24	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
Egate-20	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–
Egate-100	300	+	+	+	–	–	–	–	–	300	+	+	+	+	–
FPS-8	300	+	+	–	–	–	–	–	–	300	–	–	–	–	–
RIC-155	300	+	–	–	–	–	–	–	–	300	–	–	–	–	–
RICi-E1	300	+	+	+	–	–	–	–	–	200	+	–	–	–	–
RICi-T1	300	+	+	+	–	–	–	–	–	200	+	–	–	–	–
RICi-E3	300	+	+	+	–	–	–	–	–	200	+	–	–	–	–
RICi-T3	300	+	+	+	–	–	–	–	–	200	+	–	–	–	–
RICi-4E1	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–
RICi-4T1	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–
RICi-8E1	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–
RICi-8T1	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–
RICi-16E1	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–
RICi-16T1	300	+	+	+	–	–	–	–	–	300	+	–	–	–	–

Product Name	Reboot Timeout (sec)	SW Downld	Config Downld	Config Upld	Additional SW Downld	Statistics Upld	User Downld	User Upld	File Name Within Product	Timeout (sec)	SW Upld	SW Downld to Bkp & Swap Main and Bkp SW	SW Upload from Bkp	License Downld	Subsys Downld
RICi-155GE	300	+	+	+	–	–	–	–	–	300	–	–	–	–	–
RICi-622GE	300	+	+	+	–	–	–	–	–	300	–	–	–	–	–
RICi-SE	300	+	+	+	–	–	–	–	–	200	+	–	–	–	–
SPS-3S	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
SPS-4	300	+	–	–	–	–	–	–	–	300	–	–	–	–	–
SPS-6	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
SPS-12	300	–	+	–	–	–	–	–	–	300	–	–	–	–	–
VMUX-400	300	+	+	+	–	–	–	–	–	300	–	–	–	–	–

Notes

- *(+) means supported and (–) means unsupported*
- *The **Reboot Timeout (sec)** and **Timeout (sec)** values are the default values for these products, and should be used in the Add Product dialog box.*

Selecting the File to Download

➤ **To select the file to download:**

1. In the Add Product dialog box (see *Figure 4-15*) or the Edit Product dialog box (see *Figure 4-18*), click **<Browse>** next to the **S/W Download File** field.

   The Select File to Download dialog box appears (see *Figure 4-16*).

2. Select the folder name and file name.
3. Click **<Select File to Download>**.

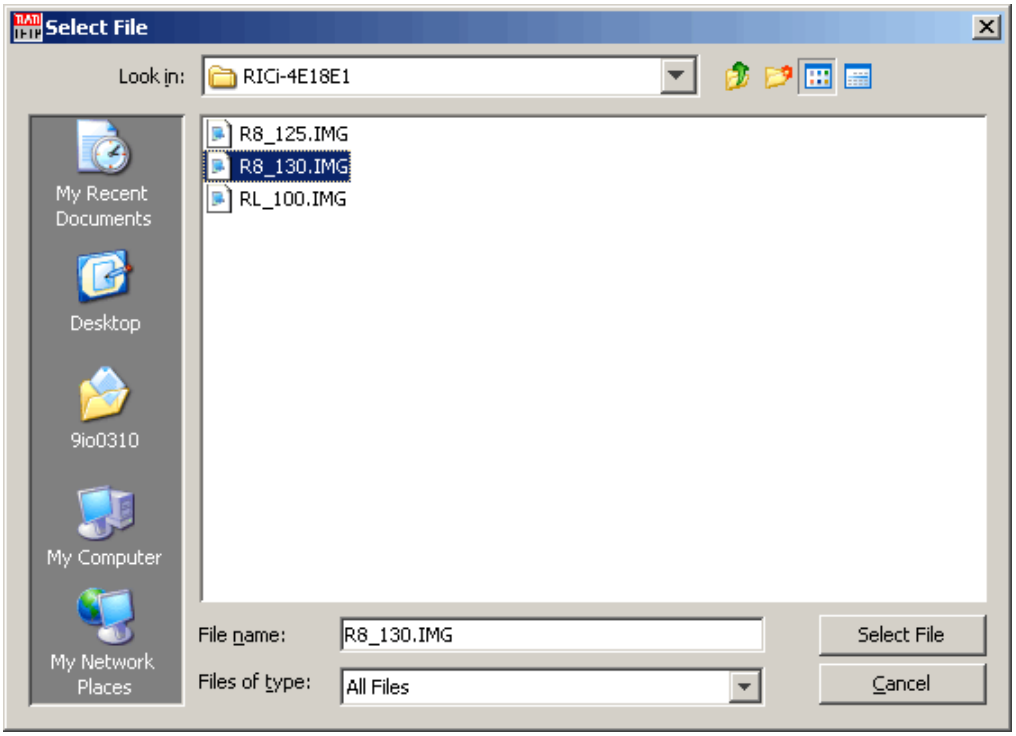

Figure 4-16. Select File to Download Dialog Box

Editing Product Data

➤ **To edit product data:**

1. From the Configuration menu select **Edit Database**.

   The Edit Database dialog box appears (see *Figure 4-17*).

2. Select the product that you want to edit.
3. Click **<Edit>**.

   The Edit Product dialog box appears (see *Figure 4-18*).

4. In the Edit Product dialog box, fill in the fields as specified in *Table 4-8*.

5. Define **S/W Download** (or other Operation) **file**. There are two methods:
   - In the **S/W Download** (or other Operation) **file** field, type the name of the **S/W Download** (or other Operation) **file**. There is no need to specify the full path, just the file name.

     Or
   - Follow the procedure in *Selecting the File to Download*.
6. Click **<Set>**.
7. In the Edit Database dialog box, click **<Close>**.

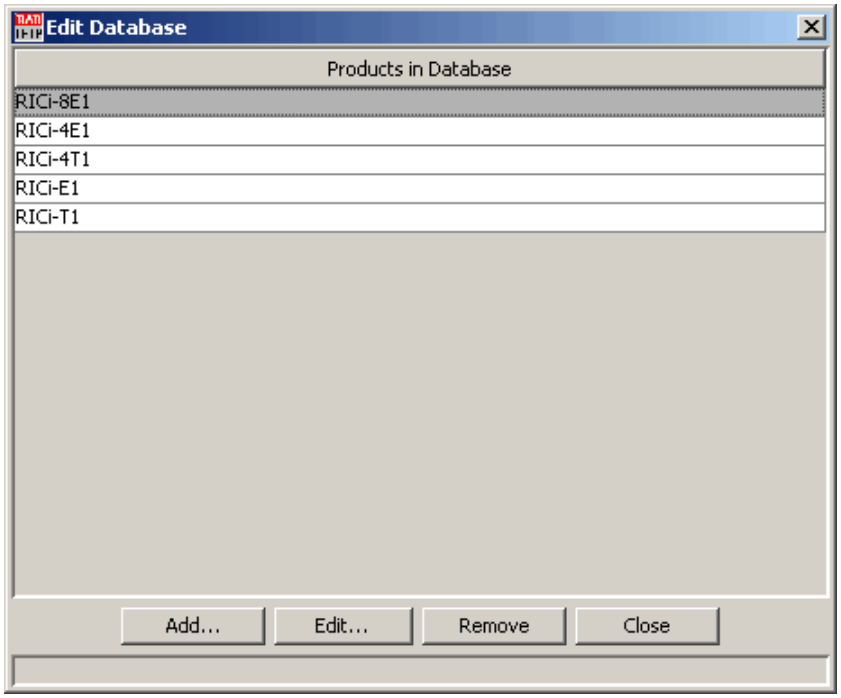

Figure 4-17. Edit Database Dialog Box

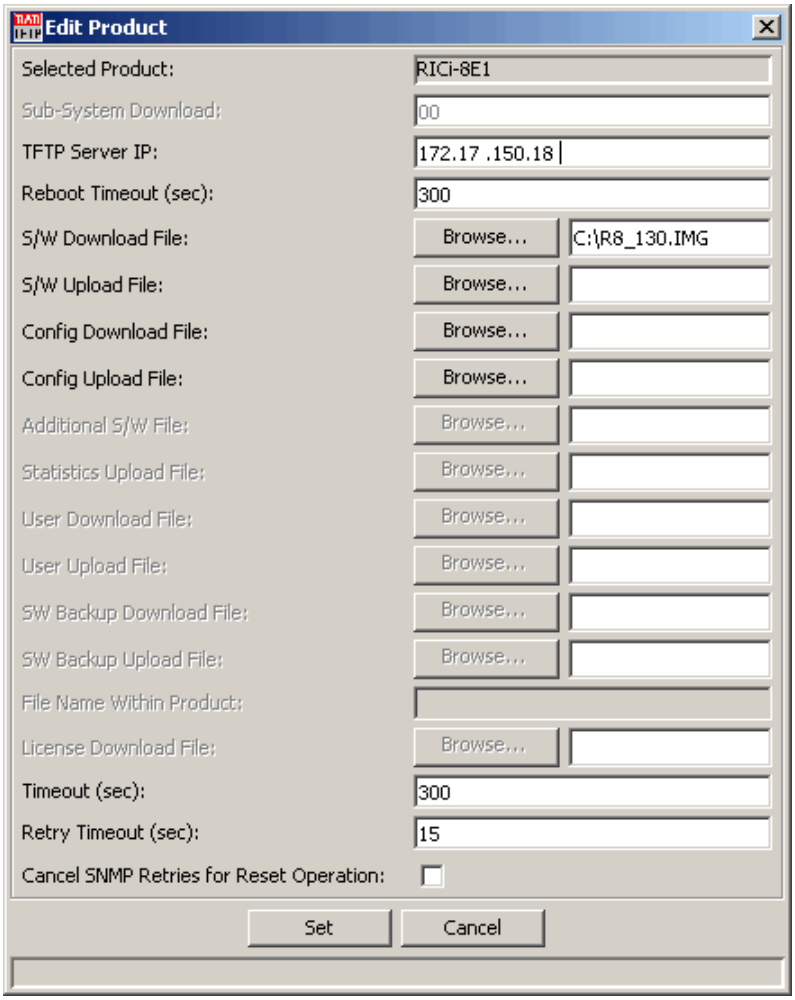

Figure 4-18. Edit Product Dialog Box

➤ **To remove a product from the database:**

1. From Configuration menu select **Edit Database**.

   The Edit Database dialog box appears (see *Figure 4-17*).

2. Select the product that you want to delete.
3. Click ‹**Remove**›.

   A confirmation message is displayed: **`Removing <Product Name>.`**

4. Click ‹**OK**›.

Note *When entering a file name for the first time, you can enter any name. During the Configuration Upload process, the selected file is replaced by a file with the same name, containing the device configuration.*

Selecting Nodes for TFTP

You can select all agents or specific agents for S/W and Configuration Transfer operations via the Operation tab (see *Figure 4-19*).

You can perform TFTP file transfer operations on all nodes or selected nodes. You can add nodes individually or from the map to link profiles to specific IP addresses.

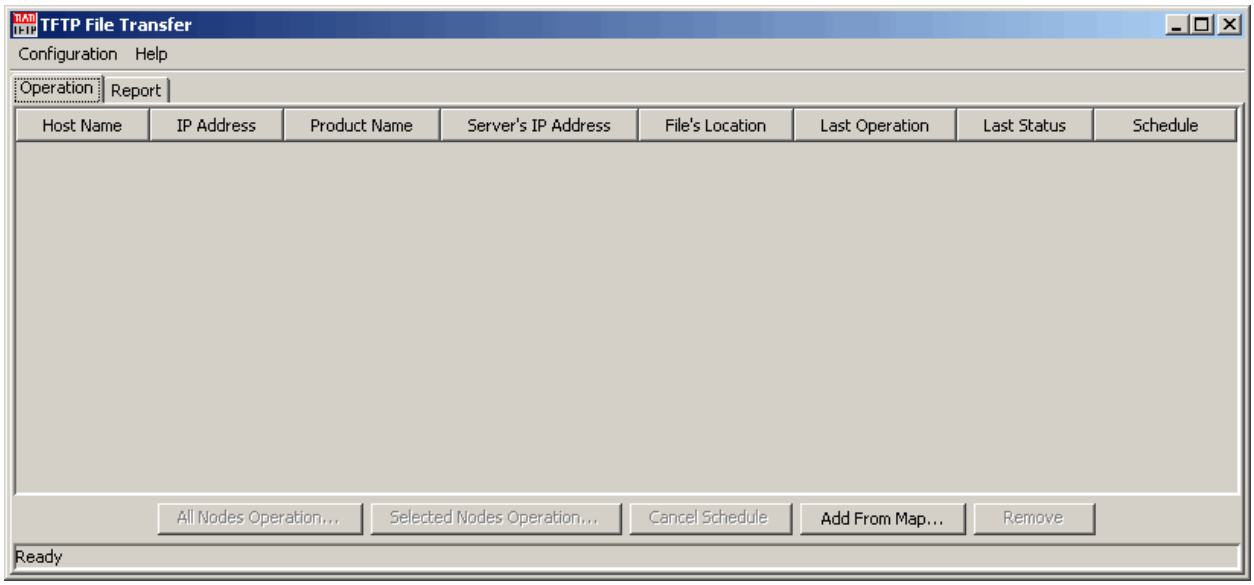

Figure 4-19. Operation Tab

Note *When the Operation tab first appears, it is empty. Open the Edit Database tab first to define the initial parameters.*

Table 4-10. TFTP File Transfer Parameters in Operation Tab

Parameter	Function
Host Name	The name of the agent. By default, the name of the selected node is displayed
IP Address	The IP address of the agent. By default, the IP address of the selected node is displayed
Product Name	Product names of the selected agents
Server IP Address	The IP address of the server, as assigned for this mode in the TFTP database
File Location	The location of the file. By default, the PC Windows user home location is displayed, according to the type of station running the present application
Last Operation	Last selected operation for each node: **S/W Download Only, S/W Download &Reboot, Config. Download Only, Config. Download & Reboot, Config. Upload, Additional SW Download Only, Additional SW Download & Reboot, Statistics Upload, User Download Only, User Upload, Reset Only**
SW Upload	The name of the file to upload
SW Download to Backup	The software file to download when backup is required

Parameter	Function
Swap Main and Backup SW	If the Swap Main and Backup SW operation is successful (when set has been accepted by the agent), the last status displays **`Operation Performed`** with a green background. Otherwise, the status displays **`No SNMP connectivity`** with a red background. This option is supported by all products that support SW Download to Backup.
Last Status	Last TFTP status of each node. The default is blank. This column displays the last TFTP status of each node as detailed in *Table 4-13*. The row displaying the last TFTP status of each node has a color-coded background as detailed in *Table 4-13*. The column is empty before clicking the **‹Set›** button and/or confirming all messages prompting for confirmation related to the [All Nodes Operation...] or [Selected Nodes Operation...] Dboxes. After clicking the **‹Set›** button, the column is automatically filled in for the selected nodes according to the tftpStatus MIB object received directly by NMS upon request or received with the tftpStatusChangeTrap each time the status changes. The column displays the last status only, meaning the last status received always overwrites the previous status.
Schedule	This field is used only when the relevant entry has been scheduled; if no transfer is scheduled it remains empty If a TFTP transfer has been scheduled the field contains: **`<Operation selected> scheduled for <yyyy:mm:dd hh:mm>`**
[All Nodes Operation...]	Performs operation for all nodes in the list
[Selected Nodes Operation...]	Opens a selection list box to choose operation for selected nodes
[Cancel Schedule]	Available only if at least one of the selected entries has Last Status = Schedule. Clicking it cancels the scheduling of the selected entry/entries and clears the **Last Status** value
[Add from Map...]	Opens a selection list box containing all SNMP nodes on map
[Remove]	Removes an agent

Note

*In order to upgrade an agent's software, you must reboot (reset) the agent after downloading the software. In some cases, you may want to reboot the device later at a specific time. Therefore, when required, you can select an operation that includes **Download Only** for file download only, an operation that includes **Reset Only** for rebooting at a specific time after successfully downloading the software, or an operation that includes **Download & Reboot** for complete software upgrade.*

Adding Agents for TFTP Operations

You can add agents directly from the SNMPc map to the agent list in the Operation tab.

➤ **To add agents from the map:**

1. In the Operation Tab, click **<Add from Map...>**.

   The Add Agent from Map dialog box appears (see *Figure 4-20*). As RADview-PC/Lite polls all the agents, it lists in the dialog box the agents that are in the TFTP database and are on the map. When it finishes, the status bar at the bottom of the screen displays **Ready**.

2. Select the SNMP node(s) to be added.

3. Click <**Set** >.

   The SNMP node(s) are added to the list in the Operation tab.

Note *The host names in the list in the Operation tab are not updated if they are changed in the map after being added in the Operation tab.*

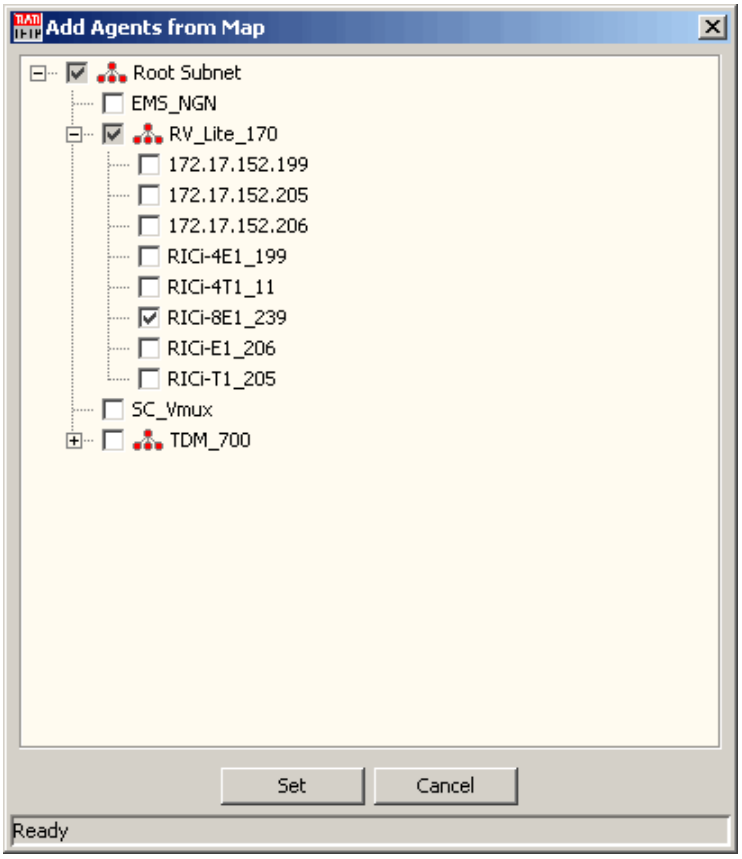

Figure 4-20. Add Agent from Map Dialog Box

➤ **To remove an agent from the Operation tab:**

1. In the list in the Operation tab, select the SNMP node that you wish to remove.

2. Click <**Remove**>.

   The SNMP node is removed from the list.

Transferring Files Using TFTP

This section explains how to transfer files using TFTP File Transfer.

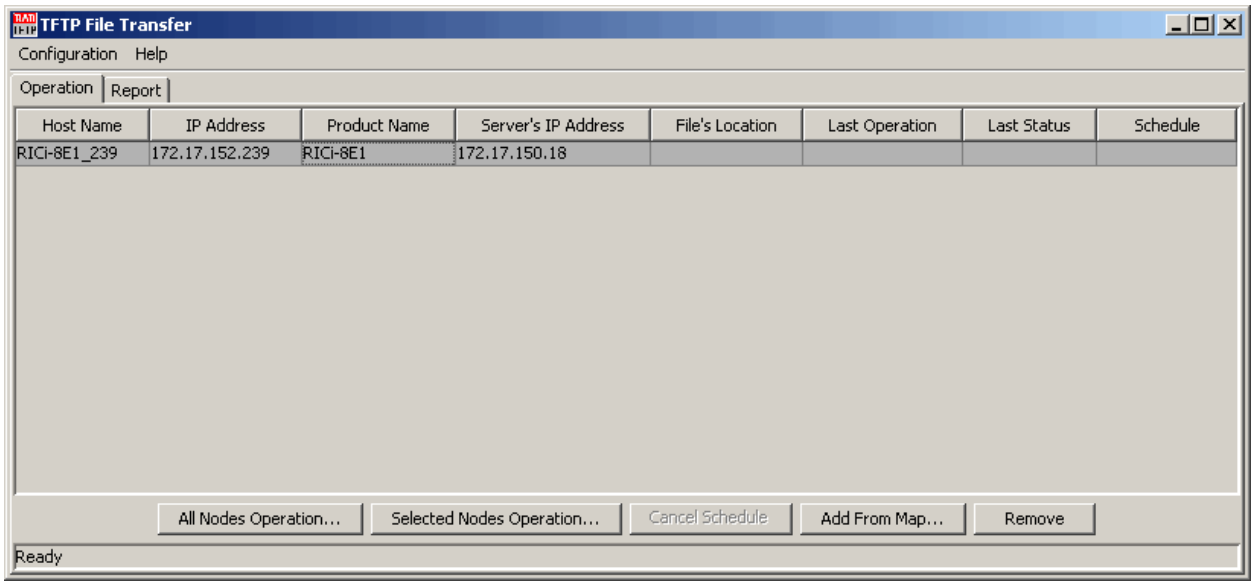

Figure 4-21: TFTP File Transfer – Operation Tab

➤ **To perform TFTP file transfer:**

1. Perform one of the following:
   - Select the specific nodes from the list on which you want to perform TFTP file transfer (hold down <**Shift**> while dragging the mouse to select several nodes) and then click <**Selected Nodes Operation**>. This can be used in case of TFTP failure. Select only those nodes where the transfer of new software was not successful, according to the Last Status column, and reinitialize the TFTP session.

     The Selected Nodes Operation dialog box appears (see *Figure 4-22*).
   - Click <**All Nodes Operation**>. This allows you use the All Nodes Operation dialog box to perform the TFTP file transfer for all the nodes in the list.
2. If using **Selected Nodes Operation**, select any S/W and Configuration Transfer operation. Only options that are supported by all nodes of the list are selectable (see *Figure 4-24*).

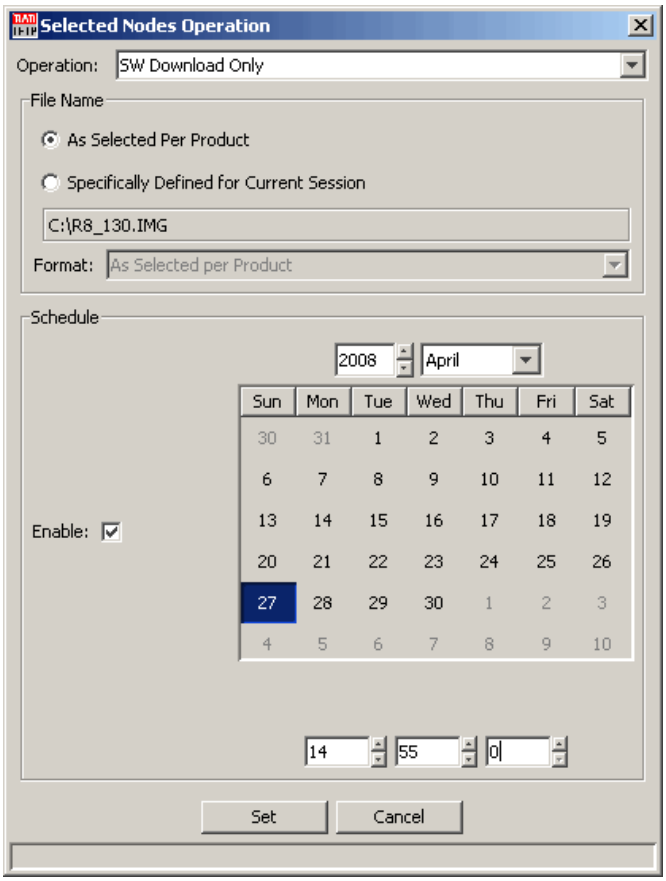
Selected Nodes Operation
Operation: SW Download Only
File Name
As Selected Per Product
Specifically Defined for Current Session
C:\R8_130.IMG
Format: As Selected per Product
Schedule
2008 April
Sun Mon Tue Wed Thu Fri Sat
30 31 1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 1 2 3
4 5 6 7 8 9 10
Enable:
14 55 0
Set Cancel

Figure 4-22. Selected Nodes Operation Dialog Box, Scheduling Enabled

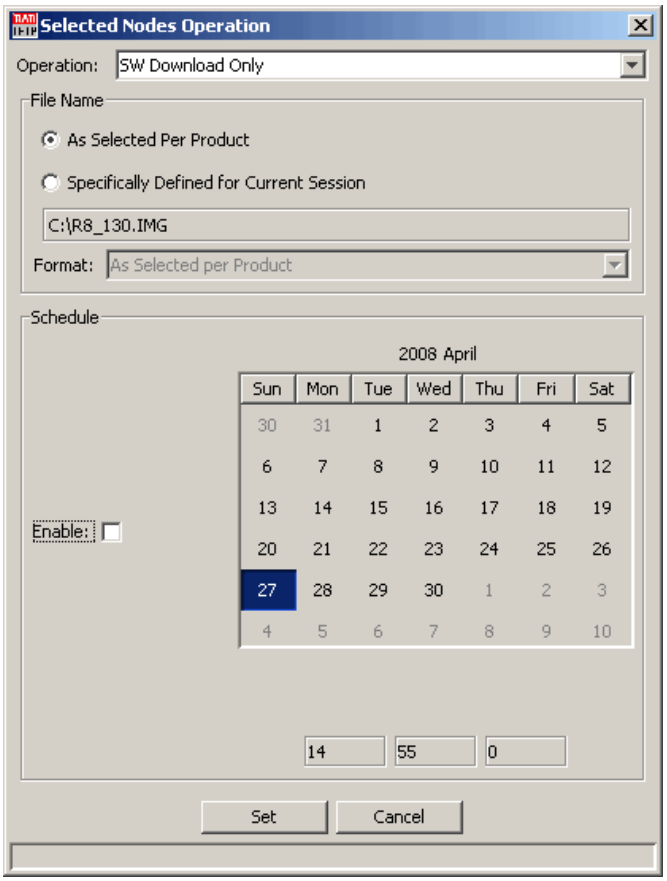
Selected Nodes Operation
Operation: SW Download Only
File Name
As Selected Per Product
Specifically Defined for Current Session
C:\R8_130.IMG
Format: As Selected per Product
Schedule
2008 April
Sun Mon Tue Wed Thu Fri Sat
30 31 1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 1 2 3
4 5 6 7 8 9 10
Enable:
14 55 0
Set Cancel

Figure 4-23. Selected Nodes Operation Dialog Box, Scheduling Not Enabled

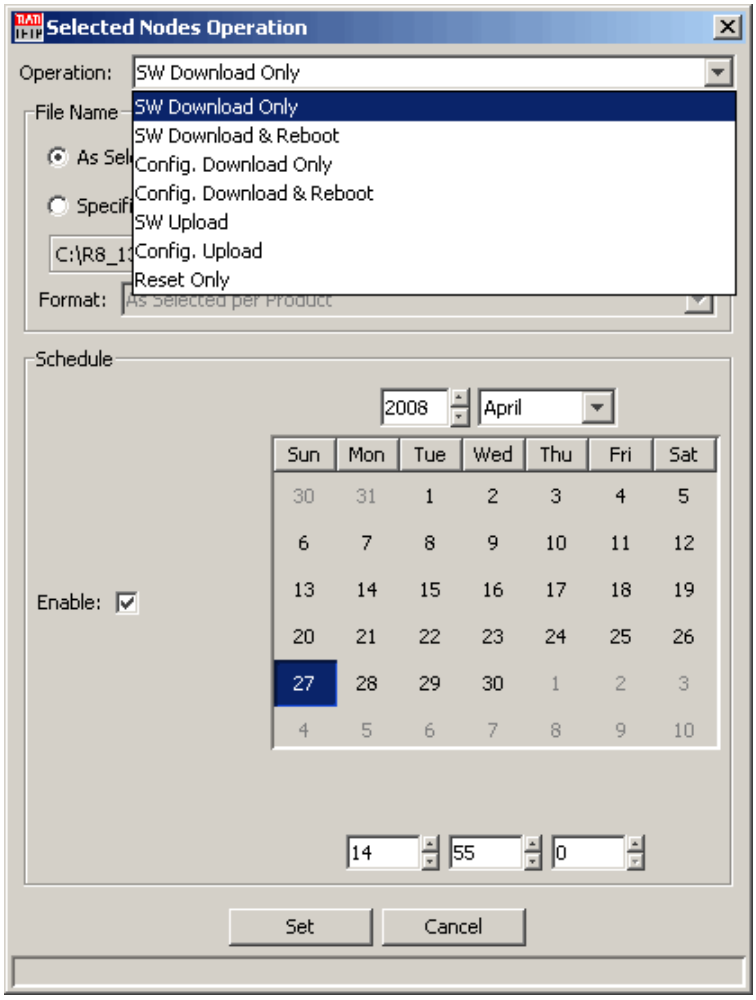

Figure 4-24. Selected Nodes Operation Dialog Box – Selection

3. Select **Enable** and select a date and time if you wish to schedule the transfer rather than start it immediately, and click ‹**Set**›.

   A confirmation message appears.

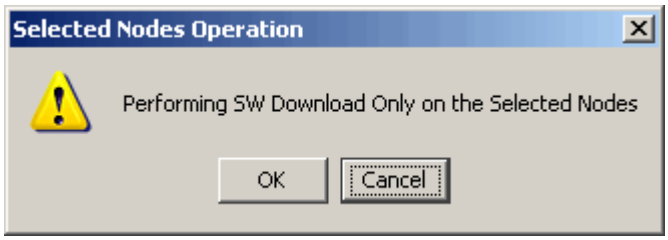

Figure 4-25. Selected Nodes Operation Dialog Box – Confirmation

4. Click ‹**OK**›.

   If schedule was enabled, the Last Status column shows the transfer has been scheduled.

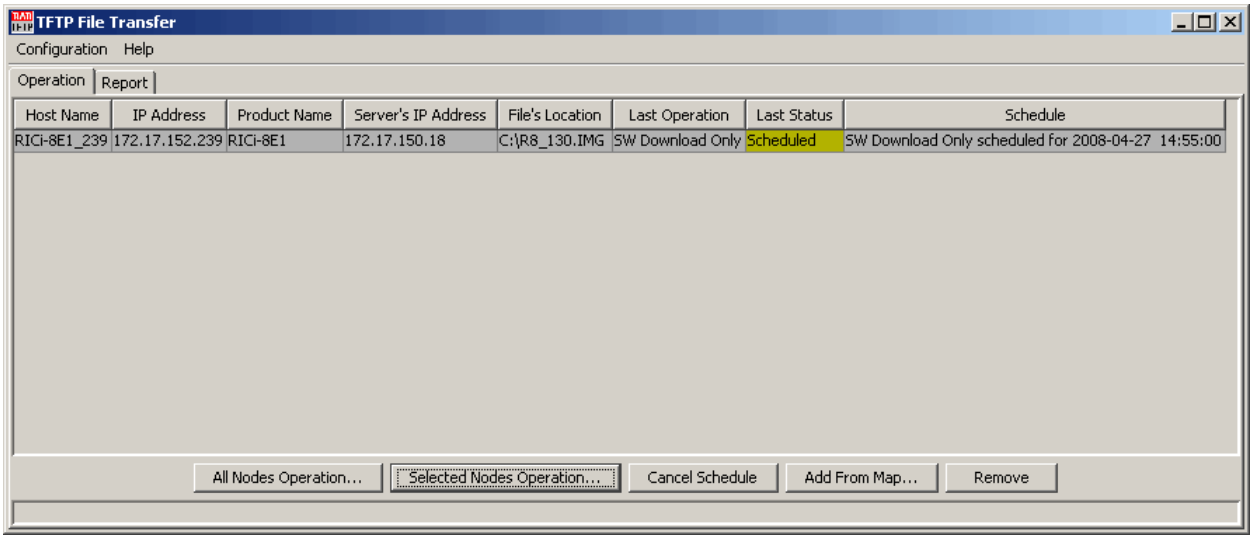
TFTP File Transfer
Configuration Help
Operation Report
Host Name IP Address Product Name Server's IP Address File's Location Last Operation Last Status Schedule
RICi-8E1_239 172.17.152.239 RICi-8E1 172.17.150.18 C:\R8_130.IMG SW Download Only Scheduled SW Download Only scheduled for 2008-04-27 14:55:00
All Nodes Operation...
Selected Nodes Operation...
Cancel Schedule
Add From Map...
Remove

Figure 4-26. TFTP File Transfer – Scheduled operation

5. After allowing time for the transfer to finish, or after the scheduled time if scheduled operation was performed, check the status reported in the Last Status column (see *Figure 4-27*) to determine whether the download was successful. Additional information is available via the Report tab (see *Viewing TFTP File Transfer Reports*).

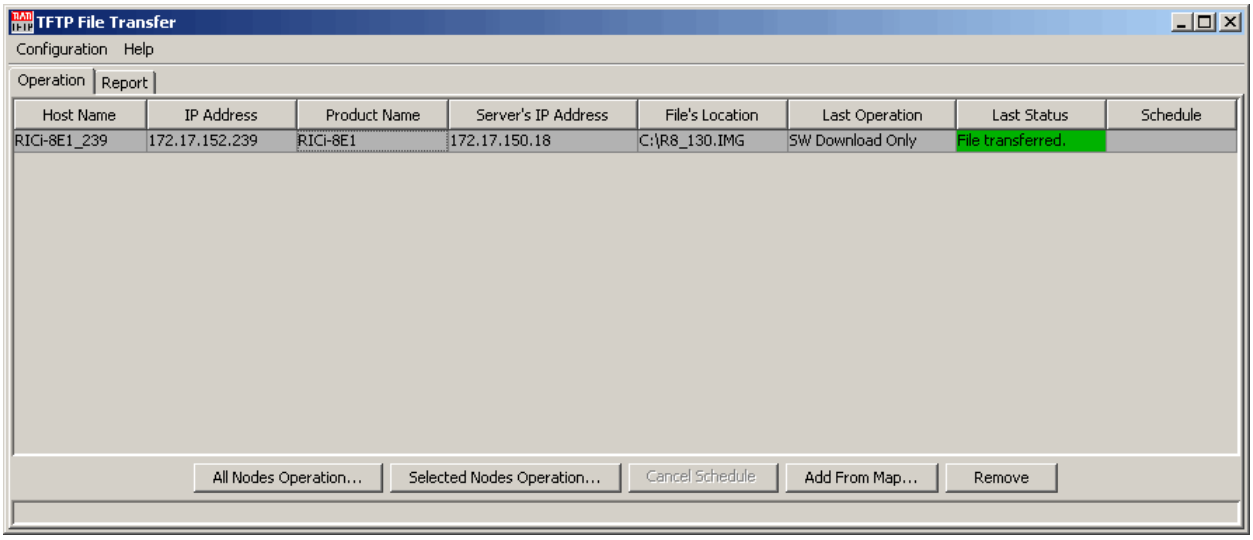
TFTP File Transfer
Configuration Help
Operation Report
Host Name IP Address Product Name Server's IP Address File's Location Last Operation Last Status Schedule
RICi-8E1_239 172.17.152.239 RICi-8E1 172.17.150.18 C:\R8_130.IMG SW Download Only File transferred.
All Nodes Operation...
Selected Nodes Operation...
Cancel Schedule
Add From Map...
Remove

Figure 4-27. TFTP Dialog Box – Operation Tab, Successful Transfer

Note *In order to upgrade an agent's software, you must reboot (reset) the agent after downloading the software. In some cases, you may want to reboot the device later at a specific time. Therefore, when required, you can select an operation that includes* ***Download Only*** *for file download only, an operation that includes* ***Reset Only*** *for rebooting at a specific time after successfully downloading the software, or an operation that includes* ***Download & Reboot*** *for complete software upgrade.*

When the operation selected in the Operation tab, [All Nodes Operation...] or [Selected Nodes Operation...] includes Download & Reboot, NMS performs the operations shown in *Table 4-11*.

Table 4-11. Download & Reboot NMS Operations

Product	Operation
Egate-20	A
Egate-100	A
RIC-155	B
RICi-E1/T1	A
RICi-E3/T3	A
RICi-4E1/T1	A
RICi-8E1/T1	A
RICi-16	A
RICi-155GE	A, when Software Download & Reboot is performed B, when Configuration Download is performed
RICi-622GE	A, when Software Download & Reboot is performed B, when Configuration Download is performed
RICi-SE	A
VMUX-400	A - when Software Download & Reboot is performed C – when Configuration Download & Reboot is performed

Legend:

A = Same as **Download Only + Reset**.
Same as **Download Only** (above) + upon successful completion, activate the Reset process.

B = Same as **Download Only**.
For these products, no additional operation is needed, because these products automatically perform a Reboot after downloading TFTP.

C = Same as **Config Download** + after receiving Set Response OK, expecting Sanity Check trap.
If Sanity Check trap result is OK or Warning, the operation succeeded

Warning

If you select *TFTP and Reboot,* the software version of the node is replaced and the system resets. Depending on the reboot time of the specific device, traffic downtime is experienced.

Viewing TFTP File Transfer Reports

The Report tab (see *Figure 4-28*) lists messages that provide a history of the TFTP File Transfer process. Reports are generated during every TFTP File Transfer procedure. The Report parameters are listed in *Table 4-12*. Messages are listed in *Table 4-13*.

Only agents for which Download/Upload is currently in process are displayed in this tab. A new row is added each time **tftpStatusChangeTrap** is received.

Note *Reports are based on traps from the agent. In order to receive traps, the workstation running the TFTP file transfer application must be registered as a manager in the agent.*

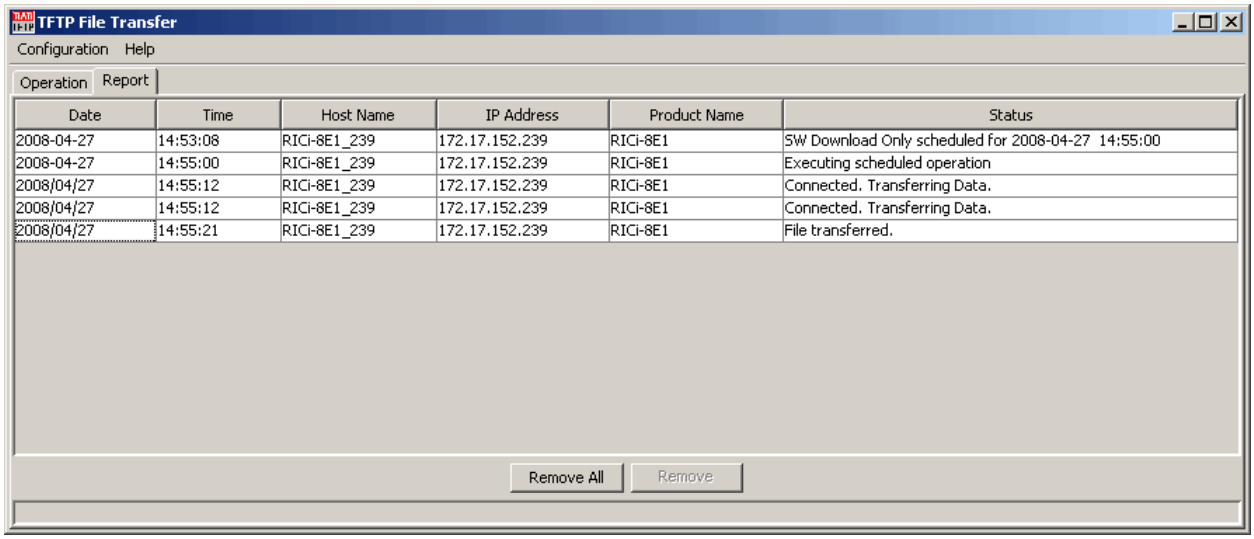
TFTP File Transfer
Configuration Help
Operation Report
Date Time Host Name IP Address Product Name Status
2008-04-27 14:53:08 RICi-8E1_239 172.17.152.239 RICi-8E1 SW Download Only scheduled for 2008-04-27 14:55:00
2008-04-27 14:55:00 RICi-8E1_239 172.17.152.239 RICi-8E1 Executing scheduled operation
2008/04/27 14:55:12 RICi-8E1_239 172.17.152.239 RICi-8E1 Connected. Transferring Data.
2008/04/27 14:55:12 RICi-8E1_239 172.17.152.239 RICi-8E1 Connected. Transferring Data.
2008/04/27 14:55:21 RICi-8E1_239 172.17.152.239 RICi-8E1 File transferred.
Remove All
Remove

Figure 4-28. TFTP File Transfer – Report Tab

Table 4-12. TFTP File Transfer - Report Tab Parameters

Parameter	Function
Date	Local date at the NMS when the message was registered
Time	Local time at the NMS when the message was registered
Host Name	Name of the relevant agent
IP Address	IP address of the relevant agent
Product Name	Name of product for which file transfer process is being reported
Status	Status of the download process (see *Table 4-13*)

Table 4-13. Status Messages

Message (Standard TFTP messages)	Color
Connecting...	Yellow
Connected. Transferring Data	Yellow
Giving up. Server does not respond	Red
File successfully transferred	Green
File not found	Red
Illegal TFTP operation	Red
Unknown transfer ID	Red
Server overflow	Red

Message (Standard TFTP messages)	Color
No available UDP port	Red
No available resources	Red
Illegal file mode	Red
Illegal PDU size	Red
Rebooting...	Yellow
Device successfully upgraded	Green
Device successfully rebooted	Green
No SNMP connectivity (only for SNMP timeout)	Red
Device not responding after expiration of reboot timer	Red
Incorrect File	Red
IP Address format of the node is not valid	Red
Unknown sysObjectID	Red
Agent is busy with another TFTP session. Operation will not be performed	Red
SNMP request failed	Red
Access violation	Red
Disk full or allocation exceeded	Red
File already exists	Red
No such user	Red
TFTP server does not exist	Red
Wrong license format	Red
License ID already used	Red
Scheduled	Yellow
‹Operation selected› scheduled for ‹yyyy:mm:dd hh:mm:ss ›	
Executing scheduled operation	
Scheduled operation has been canceled	

➤ To remove messages from the Report tab:

- In the Report tab, select a row and click ‹**Remove**›, or click ‹**Remove All**› to clear all messages from the list.

Saving the TFTP Database

If you keep the TFTP application open for a long time you should save the database periodically to avoid losing parameter data in the event of a power failure.

➤ **To save the TFTP database:**

- From the Configuration menu, select **Save Database**.

Using Help

You can access the online user manual and information about the TFTP application via the Help menu.

➤ **To access the user manual:**

- From the Help menu, select **Help › User's Manual**.

➤ **To access information about the TFTP application:**

- From the Help menu, select **Help › About Application**.

Exiting the Application

When you select **Configuration › Exit** to exit TFTP:

- If there is at least one scheduled entry that was not performed, the following dialog box is displayed:

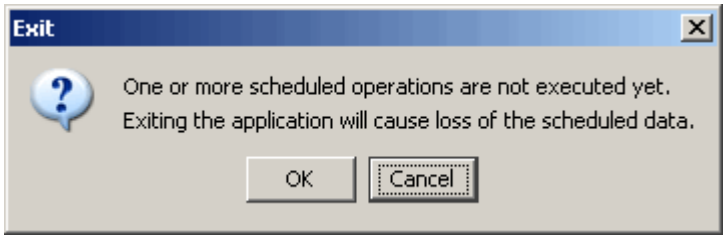
Exit
One or more scheduled operations are not executed yet.
Exiting the application will cause loss of the scheduled data.
OK
Cancel

Figure 4-29. TFTP Exit Dialog Box (Scheduled Operation Exists)

- Else, the following dialog box is displayed:

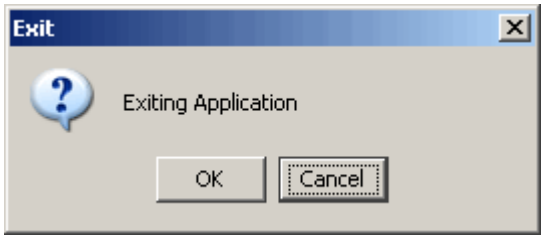

Figure 4-30. Exiting Application Dialog Box (No Scheduled Operation)

Click ‹**OK**› in both cases, to exit the application.

4.4 Viewing the Net Inventory

The Net Inventory application allows you to display an inventory table (see *Figure 4-32*) of all products that support the Entity MIB. Refer to *Chapter 1* for a list of devices that support the Net Inventory function.

The SNMP map should be open when activating Net Inventory for the first time. When you start the Net Inventory application, it reads information from all nodes representing agents on the map that support Entity MIB.

Opening the Application

➤ **To open the Net Inventory application:**

1. Select **All Programs** › **Network Manager** › **General** › **Inventory**.

Figure 4-31. Opening the Net Inventory Application

Note *The first time you start the Net Inventory application, you are prompted to confirm the data refresh, as it is a potentially time-consuming operation. Click ‹**OK**› to continue.*

The Inventory Table window appears (see *Figure 4-32*). The Inventory Table parameters are listed in *Table 4-14*.

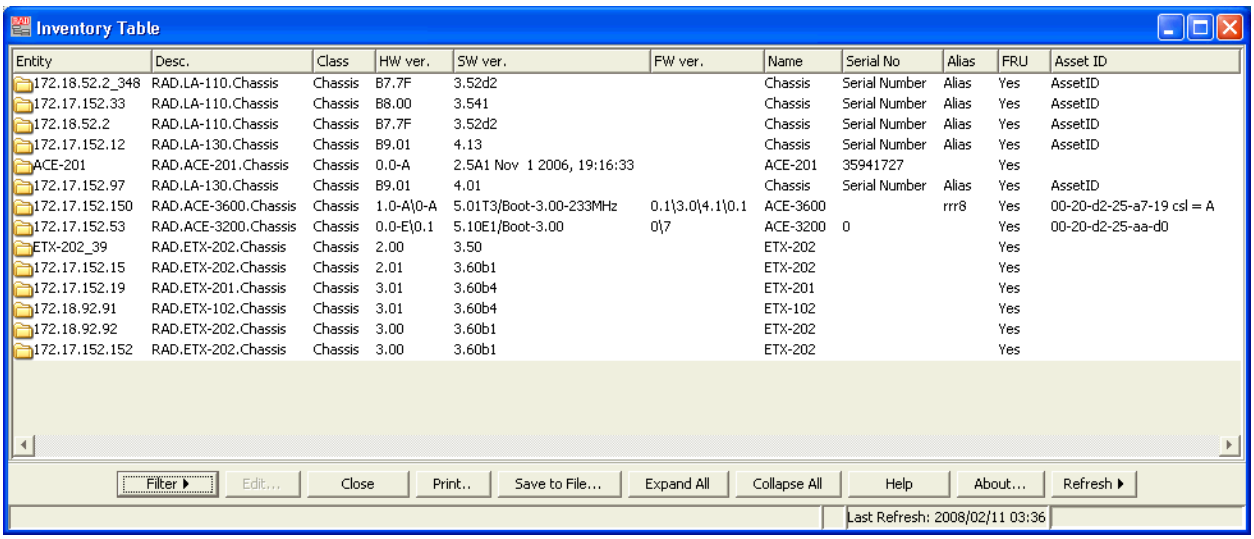
Inventory Table
Entity | Desc. | Class | HW ver. | SW ver. | FW ver. | Name | Serial No | Alias | FRU | Asset ID
172.18.52.2_348 | RAD.LA-110.Chassis | Chassis | B7.7F | 3.52d2 | | Chassis | Serial Number | Alias | Yes | AssetID
172.17.152.33 | RAD.LA-110.Chassis | Chassis | B8.00 | 3.541 | | Chassis | Serial Number | Alias | Yes | AssetID
172.18.52.2 | RAD.LA-110.Chassis | Chassis | B7.7F | 3.52d2 | | Chassis | Serial Number | Alias | Yes | AssetID
172.17.152.12 | RAD.LA-130.Chassis | Chassis | B9.01 | 4.13 | | Chassis | Serial Number | Alias | Yes | AssetID
ACE-201 | RAD.ACE-201.Chassis | Chassis | 0.0-A | 2.5A1 Nov 1 2006, 19:16:33 | | ACE-201 | 35941727 | | Yes |
172.17.152.97 | RAD.LA-130.Chassis | Chassis | B9.01 | 4.01 | | Chassis | Serial Number | Alias | Yes | AssetID
172.17.152.150 | RAD.ACE-3600.Chassis | Chassis | 1.0-A\0-A | 5.01T3/Boot-3.00-233MHz | 0.1\3.0\4.1\0.1 | ACE-3600 | | rrr8 | Yes | 00-20-d2-25-a7-19 csl = A
172.17.152.53 | RAD.ACE-3200.Chassis | Chassis | 0.0-E\0.1 | 5.10E1/Boot-3.00 | 0\7 | ACE-3200 | 0 | | Yes | 00-20-d2-25-aa-d0
ETX-202_39 | RAD.ETX-202.Chassis | Chassis | 2.00 | 3.50 | | ETX-202 | | | Yes |
172.17.152.15 | RAD.ETX-202.Chassis | Chassis | 2.01 | 3.60b1 | | ETX-202 | | | Yes |
172.17.152.19 | RAD.ETX-201.Chassis | Chassis | 3.01 | 3.60b4 | | ETX-201 | | | Yes |
172.18.92.91 | RAD.ETX-102.Chassis | Chassis | 3.01 | 3.60b4 | | ETX-102 | | | Yes |
172.18.92.92 | RAD.ETX-202.Chassis | Chassis | 3.00 | 3.60b1 | | ETX-202 | | | Yes |
172.17.152.152 | RAD.ETX-202.Chassis | Chassis | 3.00 | 3.60b1 | | ETX-202 | | | Yes |
Filter
Edit...
Close
Print..
Save to File...
Expand All
Collapse All
Help
About...
Refresh
Last Refresh: 2008/02/11 03:36

Figure 4-32. Net Inventory Opening Window

The table is a hierarchical system. When you click the icon to the left of an entity, the tree expands to display all entities that have the selected component ID in their entPhysicalContainedIn MIB parameter. You can sort each column if the left-hand tree is at the node level.

Note *In order to save/print the entire display, verify that no rows are selected (click <**Ctrl**> and the left mouse button to deselect any selected rows).*

Table 4-14. Net Inventory Table Parameters

Parameter	Function
Entity	Unique value that identifies the physical entity
Desc.	Description of the entity
Class	Class of the entity Possible values: **Modem**, **Chassis**, **Back-Plane**, **Slot**, **PS**, **Sensor**, **Card**, **Fan**, **Port**, **CPU, Stack** (Stack of chassis (real or virtual) intended to be grouped together as multiple chassis entities) ***Note**: A chassis that is connected to one or more remote chassis returns a virtual stack as its "parent". This virtual stack is the "parent" of all remote chassis connected to the same "parent".* *Managed Remote chassis is not taken into account, and is not part of the virtual stack.*
HW ver.	Hardware revision of the entity
SW ver.	Software revision of the entity
FW ver.	Firmware revision of the entity FW usually applies to ASIC
Name	Name of entity
Serial No.	Read/Write field containing the entity serial number (read from the entity hardware)
Alias	Read/Write field containing the alias name for the entity
FRU	Indicates whether entiry is Field Replaceable Unit **True** – this entity can be replaced in the field **False** – this entity cannot be replaced in the field
Asset ID	Identification information added to the entity. It can be used to indicate the Configuration Status Letter (CSL) of the unit component.
[Filter...]	Opens a dialog box to filter the entity
[Edit...]	Opens a dialog box to edit the parameters of the selected row
[Close]	Closes the application
[Print...]	Prints all selected rows
[Save to File...]	Saves all selected rows
[Expand All]	Expands all entities to display all subordinates down to the lowest level
[Collapse All]	Closes all tree entries to display node level only
[Help]	Displays Help file

Parameter	Function	
About	Displays info about the program, such as version and licensing information	
[Refresh]	Opens the following submenu:	
	Synchronize All	Refreshes information for all displayed entities
	Refresh Selected	Refreshes information for selected entities
	Remove Selected	Removes selected entities from net inventory table.
	Add New Nodes from Map	Adds new entities to inventory table, containing data of nodes that were added to map
Last Refresh	NMS time when the last refresh was performed	

Filtering the Display

You can display only nodes that you wish to view.

➤ **To filter the display:**

1. In the Inventory Table, select **Filter**› **Filter**.

   The Inventory List Filter dialog box appears (see *Figure 4-33*).

2. Select whether you want to filter on:
   - All Map Nodes
   - Displayed Nodes Only.

Note

Only one selection can be made at a time.

3. Select any parameters that you want to use as a filter, and enter the filter criteria.
4. Click ‹**OK**›.

   Only those nodes with entities matching all the filter criteria are displayed.

Note

- *Filtering is not case-sensitive.*
- *The only wild card character that can be used in the filter criteria is *****.*

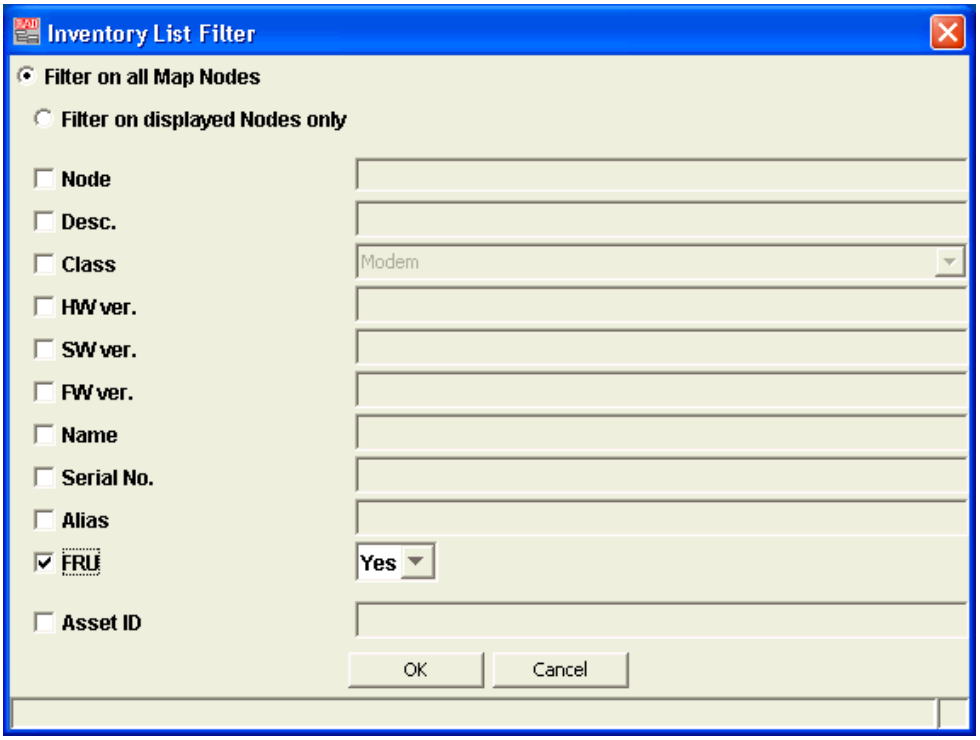

Figure 4-33. Inventory List Filter Dialog Box

Table 4-15. Inventory List Filter Parameters

Parameter	Function
Filter on all map nodes	Perform filtering on all map nodes
Filter on displayed nodes only	Perform filtering on displayed nodes
Node	If selected, enter node name value for filtering
Desc	If selected, enter description value for filtering
Class	If selected, choose value from dropdown list for filtering: **Modem, Chassis, Back-Plane, Slot, PS, FAN, Sensor, Card, Port, Stack**, CPU
HW ver.	If selected, enter hardware revision value for filtering
SW ver.	If selected, enter software revision value for filtering
FW ver.	If selected, enter firmware revision value for filtering
Name	If selected, enter name value for filtering
Serial No.	If selected, enter serial number value for filtering
Alias	If selected, enter alias value for filtering
FRU	If selected, choose **Yes** or **No** from dropdown list to filter for field replaceable units or non-field replaceable units
Asset ID	If selected, enter asset ID value for filtering

Editing an Entity

➤ **To edit an entity:**

1. In the Inventory Table, select an entity (row) and click ‹**Edit**›.

   The Edit dialog box appears (see *Figure 4-34*).

2. Modify the desired parameters.
3. Click ‹**Set**›.

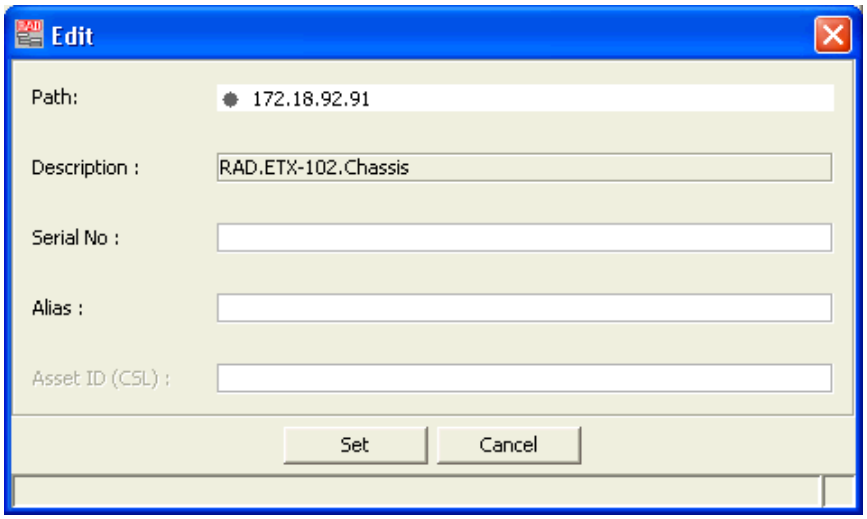

Figure 4-34. Edit Dialog Box

Expanding/Collapsing Sublevels

➤ **To expand/collapse sublevels of an entity:**

- In the Inventory Table, double-click an entity.

➤ **To expand all sublevels of all entities in a tree:**

- In the Inventory Table, click ‹**Expand All**›.

  All tree entries are displayed to the lowest level (see *Figure 4-35*).

➤ **To collapse all sublevels of all entities in the tree:**

- In the Inventory Table, click ‹**Collapse All**›.

  All tree entries are displayed at the node level (see *Figure 4-32*).

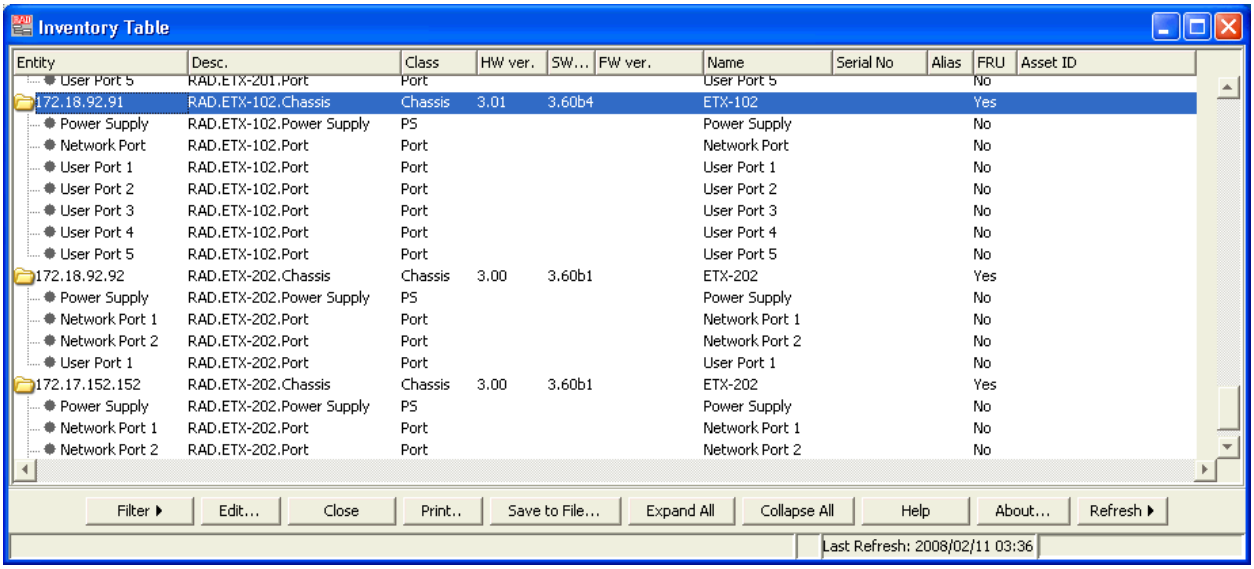
Inventory Table
Entity
Desc.
Class
HW ver.
SW...
FW ver.
Name
Serial No
Alias
FRU
Asset ID
User Port 5 RAD.ETX-201.Port Port User Port 5 No
172.18.92.91 RAD.ETX-102.Chassis Chassis 3.01 3.60b4 ETX-102 Yes
Power Supply RAD.ETX-102.Power Supply PS Power Supply No
Network Port RAD.ETX-102.Port Port Network Port No
User Port 1 RAD.ETX-102.Port Port User Port 1 No
User Port 2 RAD.ETX-102.Port Port User Port 2 No
User Port 3 RAD.ETX-102.Port Port User Port 3 No
User Port 4 RAD.ETX-102.Port Port User Port 4 No
User Port 5 RAD.ETX-102.Port Port User Port 5 No
172.18.92.92 RAD.ETX-202.Chassis Chassis 3.00 3.60b1 ETX-202 Yes
Power Supply RAD.ETX-202.Power Supply PS Power Supply No
Network Port 1 RAD.ETX-202.Port Port Network Port 1 No
Network Port 2 RAD.ETX-202.Port Port Network Port 2 No
User Port 1 RAD.ETX-202.Port Port User Port 1 No
172.17.152.152 RAD.ETX-202.Chassis Chassis 3.00 3.60b1 ETX-202 Yes
Power Supply RAD.ETX-202.Power Supply PS Power Supply No
Network Port 1 RAD.ETX-202.Port Port Network Port 1 No
Network Port 2 RAD.ETX-202.Port Port Network Port 2 No
Filter
Edit...
Close
Print..
Save to File...
Expand All
Collapse All
Help
About...
Refresh
Last Refresh: 2008/02/11 03:36

Figure 4-35. Inventory Table Dialog Box – Expand All

Chapter 5

Performance Management

5.1 Viewing Product Statistics

Product statistics are available only for VMUX-400 units.

5.2 Collecting Statistics from VMUX-400 Units

The Statistics Application collects statistics from VMUX-400 units and displays them in graph form.

The main features of this application are:

- Statistics Collection
  - Collecting statistics data from Vmux-400 by using TFTP
  - Saving the collected data in files (in CSV format) at the Network Management Station (NMS).
- Statistics Display
  - Displaying statistics graphically (e.g., graph line)
  - Filtering the displayed data (e.g., for a certain time window).

System Requirements

Before using this application for a Network Element (NE), you should verify:

- A TFTP Server is activated and properly configured in the NMS
- The read & write communities for the node are correct
- The NMS IP address exists in the agent's manager list
- The trap rad.tftpStatusChangeTrap is not masked in the agent
- There is enough free disk space for the statistics files. For example the disk space needed for a Vmux-400 device with one bundle is 2 MB per day. Therefore, 10 Vmux-400 units that have five bundles require 100 MB per day and 3 GB per month.

If you change NE name or SNMP properties in the SNMPc map, you must open the statistics application GUI and reload the updated data from the map.

Managing Statistics Data

The NMS stores the following information for each data type per NE type:

Data Type — Type of statistics data in each file, combination of:

- Data type (running/current/intervals)
- Interface type and number (e.g., port 1, bundle 5, etc.)

Data Resolution — Minimum time difference between two sequential data samples. Obviously, it is one of the most significant attributes that defines how much data can be collected in each file.

Time Interval — Time period of statistics data in each file. This time period is used in most cases when collecting data from an Agent. Refer also to Agent Max Interval.

Agent Max Interval — Maximum time period of statistics data that can be saved in an agent. This time period is used whenever the statistics application needs to "fill gaps" in an agent's missing data. This is used particularly when collecting data from an agent for the first time.

NE Type	Data Type	Data Resolution	Time Interval	Agent Max Interval
Vmux-400	Running counters of all bundles	1 second	15 minutes	1 hour

The NMS database stores the following information for each NE:

Information	Description	RO/RW
Name	Name of the NE (taken from map).	RO
IP Address	IP Address of the NE	RO
NE Type	NE Type	RO
Collection Activation	Whether or not NE is activated (Collection Activation = "Enable"). Only when activated – the statistics application should collect data for this NE.	RW
Collection Period	The time period that the statistics application should save data for this NE. Whenever collected data exceeds the Collection Period, the old data is automatically deleted.	RW
Collection Timer	The time of the next statistics collection (that should be initiated by the statistics application). Format can be Date & Time, countdown time, etc.	RO

Information	Description	RO/RW
Interfaces List	List of all NE interfaces that include collected data in NMS database. List is updated within collections.	RO

The statistics application stores the following interface information for each NE:

Information	Description	RO/RW
Interface Name	Name of the interface (e.g., Bundle5).	RO
Collected Data	All statistics data (counters) that is collected for this NE	RO

The statistics application manages the data files received from the NEs as follows:

- Convert data files into ASCII format
- Arrange files in folders, using a folder for each NE (NE name)
- Save all ASCII files of an NE under its folder
- Manage calendar day (full or partial day) files for each interface of an NE

The ASCII file name format includes the following segments (separated by underscore):

Segment	Description
Name	ASCII string (e.g., device IP Address)
NE Type	Vmux-400
Interface	Bundle number
NMS Date	YYYY-MM-DD (ISO format) of the last data sample

Example: **`172.52.150.76_Vmux-400_Bundle5_2006-10-10`**

The following tables shows the MIBs that are supported for the statistics application.

Table 5-1. MIBs Supported for the Statistics Application

MIB	RO/RW	Description
3418.sysObjectID	RO	NE Object ID, which represents the NE Type.
3418.sysUpTime	RO	NE Time (in 1/100 seconds) since last restart.
rad.fileServerIP	RW	NMS IP Address
rad.fileName	RW	File names to which the NE transfers the data
rad.fileNameWithinProduct	RW	Requested data time or interval(s).
rad.fileTransCmd	RW	Should be set to stateUpLoad(5)
rad.tftpStatusChangeTrap	Trap	A trap sent by the NE whenever TFTP operation succeeds.
rad.tftpRetryTimeOut	RW	General Retransmission timeout (in seconds).

MIB	RO/RW	Description
rad.tftpTotalTimeOut	RW	Total Retransmission timeout (in seconds).

Statistics Collection Sequence

The collection process is performed as follows for each required NE:

1. The statistics application retrieves the NE ID (3418.sysObjectID), which represents the NE type, to avoid Device Type mismatch.

   If collection data for the NE already exists in the NMS, the statistics application compares it to the NE Type stored in its database, and in case of NE Type mismatch:

   - The statistics application stops the process (no further steps are performed for this NE)
   - The NE icon in the GUI Tree is updated accordingly.

2. The statistics application retrieves the NE time (3418.sysUpTime) since the last restart (in 1/100 sec) in order to synchronize.

   The statistics application determines which data to collect from the NE, based on:

   - NMS Time
   - NE time (3418.sysUpTime)
   - Time (or Interval number) of last data sample in the NMS for this type of data (e.g., bundle).

3. The statistics application sends an SNMP request for collecting statistics data to the NE that includes (see *Table 5-1*):

   - NMS IP address
   - File name to which the NE transfers the data
   - Requested data time or interval(s) according to the following table:

Data Type	Format of Requested Data Time or Interval(s)	Example
Running	<FromTime>–<ToTime> in seconds, where: <FromTime>= time of last data sample missing in the NMS database, which cannot exceed Agent Max Interval. <ToTime> = NE time since last restart * 100 (sec)	"10001 - 10900" (15 min) "10001 - 13600" (an hour)
Intervals	<FromInt>–<ToInt> where: <FromInt>= 1 <ToInt> = No. of last interval missing in the NMS database, which cannot exceed Agent Max Interval	"1 - 4" (an hour) "1 - 96" (a day)

   - rad.fileTransCmd (set to stateUpLoad(5))

   After the first collection:

- Whenever the interval period is passed for a certain activated NE, the statistics application sends SNMP request for collecting the new statistics data (starting with the oldest statistics data that still does not exist in the NMS database).
- In case of a new NE (just added to the collection requests list), the statistics application sends SNMP requests for collecting the Agent Max Interval data available in this NE (similarly to what is performed when the statistics application is opened for the first time).

4. NE prepares data and sends file(s) to the NMS.

   Whenever an NE receives an SNMP request from the NMS, it performs the following:

   - Collects the statistics data
   - Creates binary file(s) with all relevant data (one or more, according to what is agreed with the NMS and as much as necessary)
   - Sends these files to the NMS via TFTP
   - Deletes these files from its database.

   In case all requested files are successfully uploaded, NE performs the following:

   - Sends SNMP trap **rad.tftpStatusChangeTrap** to the NMS
   - Continues to the next SNMP request.

5. The statistics application receives file(s) and converts them to ASCII files stored in the NMS.

   - Whenever the NMS receives the **rad.tftpStatusChangeTrap** trap, the statistics application converts the received binary files to ASCII files stored in the NMS (for more information see *Managing Statistics Data*).
   - In case TFTP fails to upload one of the files, the statistics application performs the following for each NE:
     - Attempts to send it again (total of three attempts)
     - If all three attempts fail, the statistics application terminates the operation.

Note

When the Server application is started for the first time, the statistics application performs the Collection Process to ALL activated NEs for collecting Agent Max Interval data available in the NEs.

Starting the Statistics Collection Application

➤ **To start the statistics application:**

- Select **All Programs** › **Network Manager** › **General** › **Performance Monitoring**.

  The main window opens (see *Figure 5-1*).

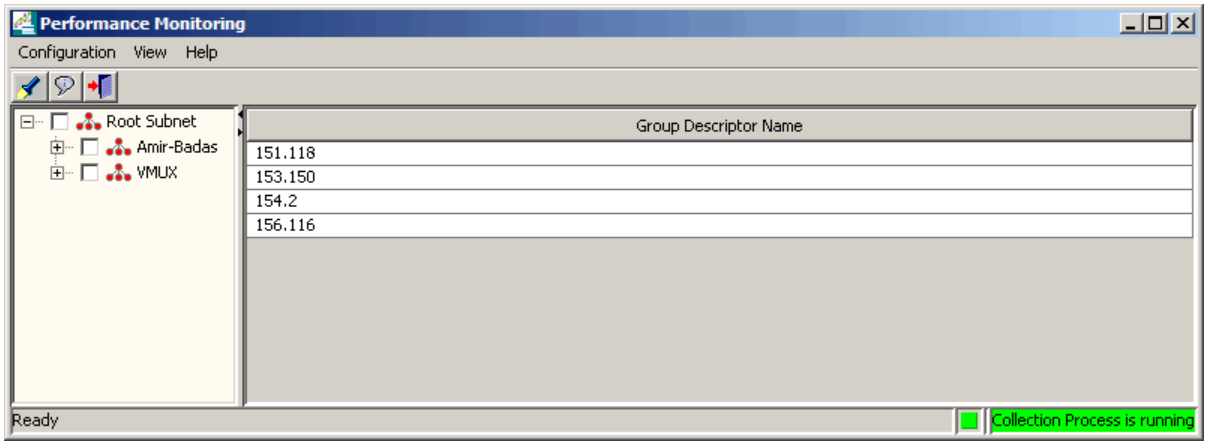

Figure 5-1. Performance Monitoring Window

The following areas exist in the main window:

- Tree Navigator – in the left side of the window

  Tree Navigator data is loaded from the map, having the same objects hierarchy, but including only nodes with OIDs supported by the application server). In addition to the data loaded from the map, the Tree Navigator includes:

  - A read-only check box next to each NE, indicating whether or not the NE belongs to the currently loaded Group Descriptor.
  - Another hierarchy level – **Bundle**, which is directly under the NE level
  - **Bundles** data is loaded from the NMS database (0...N bundles for each NE)

  Any object (in any hierarchy) in the Tree Navigator is selectable.

- Group Descriptor list – in the right side of the window (for Group Descriptor details – see also *Viewing Group Descriptors and Performing Operations*)
  - The list (in the main window) displays only the Group Descriptor Name.
  - List rows are selectable.
  - Load GD – click a Group Descriptor row in the list.
  - Change GD – double-click a Group Descriptor row in the list (or via the respective Group Descriptor dialog boxes).
- Status bar – Displays the current Collection Process status (running or stopped) in the following format:
  - "Collection Process is running" (highlighted in green)

    Or
  - "Collection Process is stopped" (highlighted in red)

Note

You can start/stop the server using commands outside this application.

- ToolTip (NE level only)
  - **Name**: value is taken from the map
  - **IP Address**: value is taken from the map

- **Device Type**: based on **3418.sysObjectID**

Configuring Statistics Collection

From the main window (see *Figure 5-1*), select **Configuration**. The following dropdown menu opens:

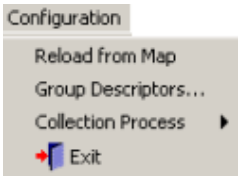

Figure 5-2. Configuration Dropdown Menu

- **Reload from Map** – reloading the Tree hierarchy. In addition, the statistics application also reloads SNMP properties (i.e., Read & Write Communities, Retries, Timeout) of each relevant NE and updates it in NMS database accordingly (if update is needed).

Note *This operation is also performed each time the statistics application is opened.*

- **Group Descriptors...** – see *Viewing Group Descriptors and Performing Operations*.
- **Collection Process** – see *Starting/Stopping Statistics Collection Process*.
- **Exit** – exiting the Configuration.

Viewing Group Descriptors and Performing Operations

➤ **To view Group Descriptors details and perform operations:**

- From the main window, select **Configuration** > **Group Descriptor**.

  The Group Descriptors dialog box (*Figure 5-3*) opens.

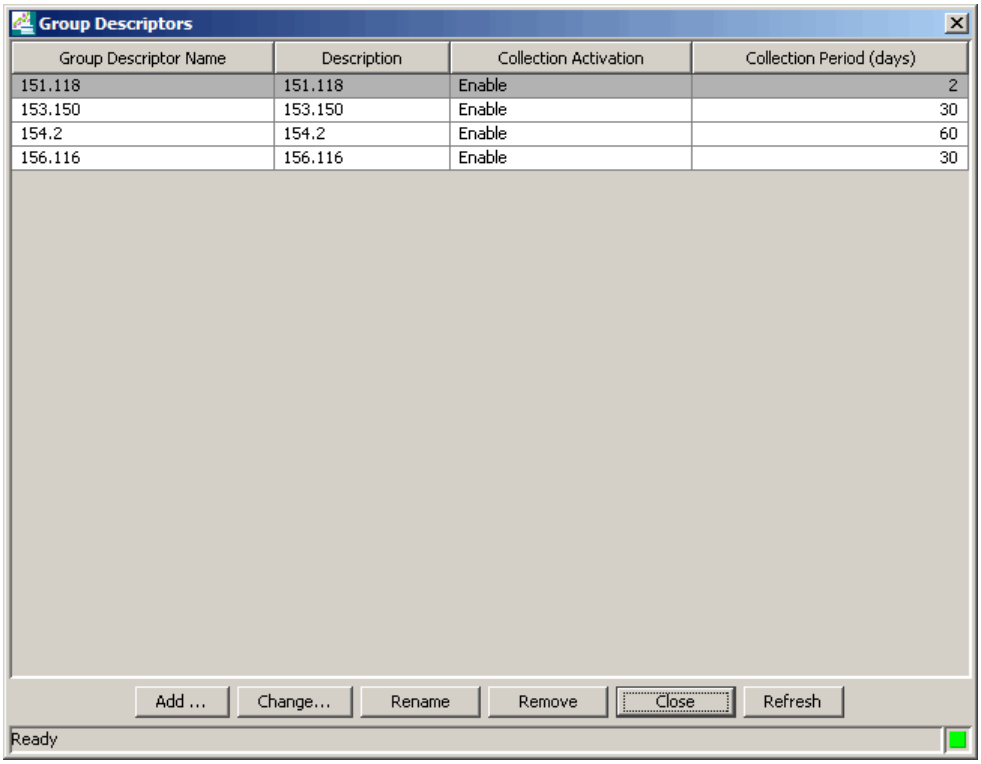

Figure 5-3. Group Descriptors Dialog Box

Table 5-2. Group Descriptors Parameters

Parameter Name	Function
Group Descriptor	See *Adding a Group Descriptor*
Description	See *Adding a Group Descriptor*
Collection Activation	See *Adding a Group Descriptor*
Collection Period (days)	See *Adding a Group Descriptor*

- Click ‹**Add...**› to add a Group Descriptor (see *Adding a Group Descriptor*).
- Click ‹**Change...**› to change a Group Descriptor (see *Changing a Group Descriptor*). This button is disabled when no Group Descriptor is selected.
- Click ‹**Rename...**› to rename a Group Descriptor (see *Renaming a Group Descriptor*). This button is disabled when no Group Descriptor is selected.
- Click ‹**Remove**› to remove a Group Descriptor.

  The following dialog box appears:

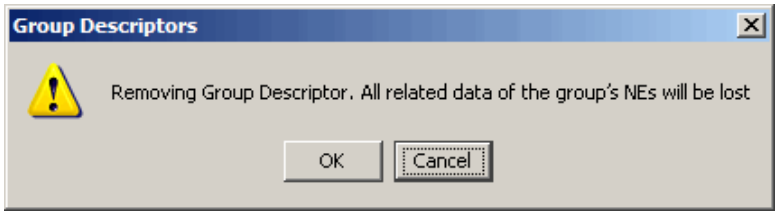

Figure 5-4. Remove Group Descriptor Dialog Box

- Click ‹**OK**› to perform the following operations for each NE in the selected Group Descriptor:
  - Stop the Collecting process if **Collection Activation** = **Enable**
  - Delete related data from NMS database

  In addition:
  - Delete selected Group Descriptor from NMS database
  - Remove selected Group Descriptor from the list.

  Or:
- Click ‹**Cancel**› to cancel the operation.

Adding a Group Descriptor

➤ **To add a Group Descriptor to NMS database:**

1. From the main window, select **Configuration** › **Group Descriptor**.
2. Click ‹**Add**›.

   The following dialog box appears:

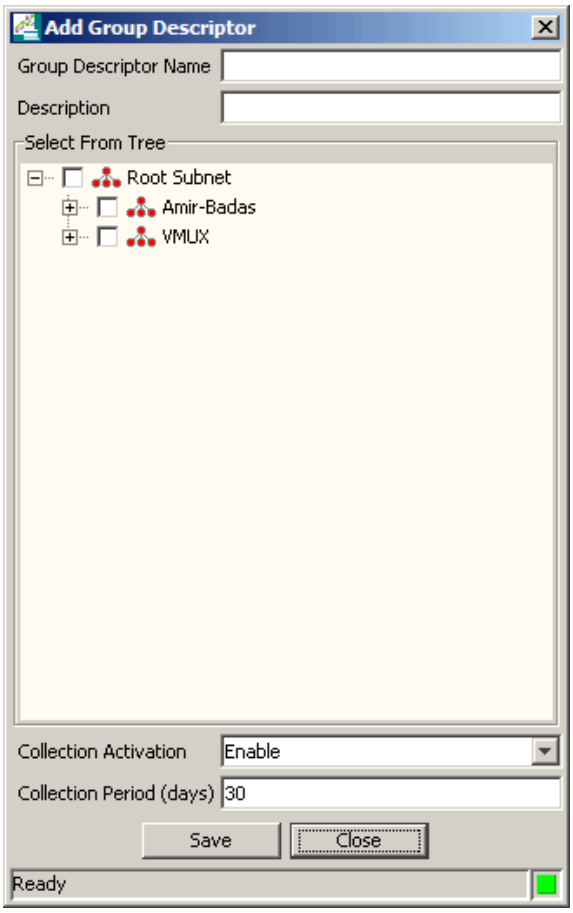

Figure 5-5. Add Group Descriptor Dialog Box

3. Set the parameters according to *Table 5-2*.

Table 5-3. Add Parameters

Parameter Name	Values	Notes
Group Descriptor Name	40-char string **Blank**	
Description	200-char string **Blank**	
Select From Tree	Generic "Tree Navigator" behavior	A map of devices in tree navigator is displayed: • Device Type (e.g., Vmux-400) is displayed in brackets next to NE name • You can select the devices to be included in the new current group (multiple selection is possible) • When an object (e.g., submap) is selected, all objects (e.g., NEs) under it in the tree are also selected • Upon entry, all devices are unchecked.
Collection Activation	Disable **Enable**	
Collection Period (days)	1...99 **30**	three digits max

4. Click ‹**Save**› to add the Group Descriptor to the NMS database.

   Upon the Save operation, the statistics application checks for each selected NE whether the Group Descriptor name already exists in NMS database. If it does, the following error message appears in the status bar (the save operation is not performed): **`Group Descriptor already exists`**

   If at least one NE is found, the following dialog box appears:

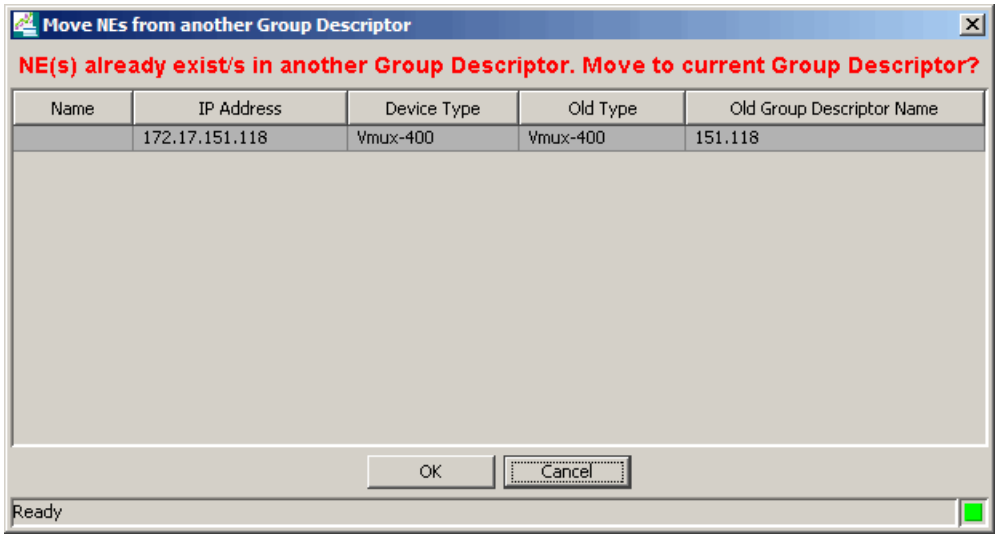

Figure 5-6. Move NEs from another Group Descriptor Dialog Box

Table 5-4. Move NEs from another Group Descriptor List

Name	Values	MIB
Name	Taken from the map	
IP Address	IP Address format	
Device Type	Taken from the map	3418.sysObjectID
Old Type	Taken from NMS database	
Old Group Descriptor Name	Taken from NMS database	

Note

Type mismatch: NE that already exists in NMS database but with a different Device Type (e.g., real NE type = X and NMS database type = Y, where X ≠ Y). Such a row is marked in red. Afterwards, the following text is displayed: **"NE(s) already exist/s in another Group Descriptor. Move to current Group Descriptor?"**

- Click ‹OK› to perform the following:
  a. For each NE Type mismatched – delete the NE data from NMS database.
  b. Each (moved) NE is moved from the old Group Descriptor to the current Group Descriptor.

The collecting process of each NE is handled according to the following tables:

Collection Activation (Current Value)	New NE (nonexistent in any Group Descriptor before added to this Group Descriptor)
Enable	Initiate process
Disable	–

Collection Activation (Old Group Descriptor → Current Group Descriptor)	Moved NE (from old Group Descriptor to current Group Descriptor)
Enable → Enable	–
Disable → Disable	–
Enable → Disable	Stop process
Disable → Enable	Initiate process

Changing a Group Descriptor

➤ To change a Group Descriptor in NMS database:

1. From the main window, select Configuration › Group Descriptor.
2. Click ‹Change›.

   The following dialog box opens:

Figure 5-7. Change Group Descriptor Dialog Box

3. Set the parameters according to *Table 5-4*.

Table 5-5. Change Group Descriptor Parameters

Parameter Name	Values	Notes
Group Descriptor Name	Selected value	
Description	200-char string **Blank**	
Select From Tree	Generic "Tree Navigator" behavior	A map of devices in tree navigation is displayed: • Device Type (e.g., Vmux-400) is displayed in brackets next to NE name • You can select the devices to be included in the new current group (multiple selection is possible) • When an object (e.g., submap) is selected, all objects (e.g., NEs) under it in the tree are also selected • Upon entry, all devices are unchecked.
Collection Activation	Disable **Enable**	

Parameter Name	Values	Notes
Collection Period (days)	1...99 **30**	3 digits max

4. Click ‹**Save**› to add Group Descriptor to NMS database.

   Upon the Save operation, the statistics application checks for each selected NE whether it corresponds to another Group Descriptor. If at least one such node is found, the dialog box shown in *Figure 5-6* appears:

Table 5-6. Move NEs from another Group Descriptor List

Name	Values	Notes
Name	Taken from the map	
IP Address	IP Address format	
Device Type	Taken from the map	
Old Type	Taken from NMS database	
Old Group Descriptor Name	Taken from NMS database	

Note

Type mismatch: NE that already exists in NMS database but with a different Device Type (e.g., real NE type = X and NMS database type = Y, where X ≠ Y). Such a row is marked in red.
Afterwards, the following text is displayed:
"NE(s) already exist/s in another Group Descriptor. Move to current Group Descriptor?"

5. Click ‹**OK**› to perform the following:
   a. For each NE Type mismatched – delete the NE data from NMS database.
   b. Each (moved) NE is moved from the old Group Descriptor to the current Group Descriptor.
   c. Check whether at least one NE is removed (unchecked) from the Group Descriptor, in which case the statistics application displays the following dialog box:

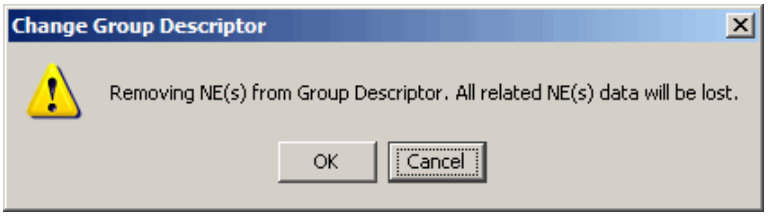

Figure 5-8. Removing NE(s) from Group Descriptor Dialog Box

   d. Click ‹**OK**›.

The collecting process of each NE is handled according to the following tables:

Collection Activation (Current Value)	**New NE (nonexistent in any Group Descriptor before added to this Group Descriptor)**
Enable	Initiate process
Disable	–

Collection Activation (Old Group Descriptor → Current Group Descriptor)	**Moved NE (from old Group Descriptor to current Group Descriptor)**
Enable → Enable	–
Disable → Disable	–
Enable → Disable	Stop process
Disable → Enable	Initiate process

Collection Activation (Old value → New value)	**Removed NE (NE that is removed from current Group Descriptor)**
Enable → Any	Stop process
Disable → Any	–

Collection Activation (Old value → New value)	**Remained NE (NE that remains in current Group Descriptor)**
Enable → Enable	–
Disable → Disable	–
Enable → Disable	Stop process
Disable → Enable	Initiate process

In addition:

- The statistics application deletes all data related to NEs removed from the NMS database.
- All other configurations are saved in the NMS database.

Renaming a Group Descriptor

➤ To rename a Group Descriptor in the NMS database:

1. From the main window, select Configuration › Group Descriptor.
2. Click ‹Rename›.

   The following dialog box opens:

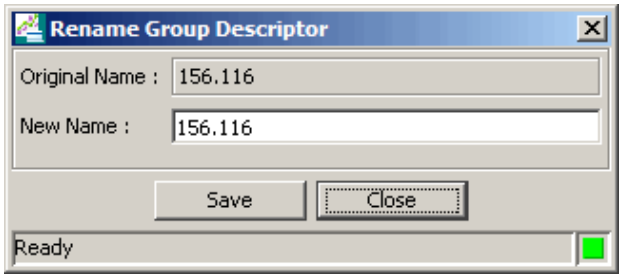

Figure 5-9. Rename Group Descriptor Dialog Box

3. Type a new name for the Group Descriptor.

Table 5-7. Rename Group Descriptor Parameters

Parameter Name	Values	Notes
Original Name	40-char string	Read-only
New name	40-char string **original name**	

4. Click ‹**Save**› to add the Group Descriptor new name to NMS database.

   Upon the Save operation, the statistics application checks whether the Group Descriptor name already exists in NMS database and if so, NMS displays an error message in the status bar (the save operation is not performed):

   `Group Descriptor already exists`

   Otherwise the statistics application renames the selected Group Descriptor.

Starting/Stopping Statistics Collection Process

➤ **To start the Statistics Collection Process:**

1. From the main window, select **Configuration** › **Collection Process**.
2. Click ‹**Start**› to start the Collection Process.

   A dialog box appears.

   - Click ‹**OK**› to start the process.

     Or:

   - Click ‹**Cancel**› to close the dialog box.

➤ **To stop the Statistics Collection Process:**

- Click ‹**Stop**› to stop the Collection Process.

  A dialog box appears.

  - Click ‹**OK**› to start the process.

    Or:

  - Click ‹**Cancel**› to close the dialog box.

Viewing the Navigation Tree

From the main window (see *Figure 5-1*), select **View**. The following dropdown menu opens:

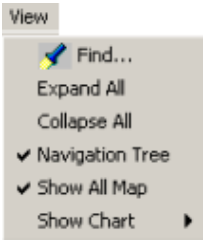

Figure 5-10. View Dropdown Menu

Finding a Node

This command is used for finding a node by name, IP address, or according to history.

➤ **To find a Node:**

1. From the View dropdown menu, select **Find**.

   The Find dialog box opens.

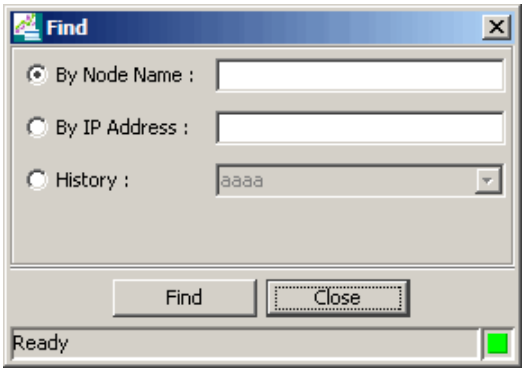

Figure 5-11. Find Dialog Box

2. Select **By Node Name**, or **By IP Address**, or **History** radio button according to the category by which to find the node (see *Table 5-7*).
3. If **By Node Name** or **By IP Address** is selected, type the node name or the node IP address in the corresponding combo box (see *Table 5-7*).
4. Click ‹**Find**› (see *Table 5-7*).

Table 5-8. Fields in the Find Dialog Box

Field Name	Function
By Node Name	Combo-box: enabled only if its radio button is selected.
By IP Address	Combo-box: enabled only if its radio button is selected.

Field Name	Function
History	Combo-box: enabled only if its radio button is selected. Displays a list of the last 20 searched names/IP addresses. If a node/IP address that appears in the list does not exist anymore in the tree, and you select it, a message appears in the status bar: "The search item was not found", and the [Find] button is disabled.
[Find]	Click to locate and select the node on the tree. If the tree is collapsed or if the view shows only the selected NEs ("Show All Map" is not checked), the view changes to the "Show All Map" view. While the Find operation is in progress, the following message is displayed in the status bar: "Working...". If an item is not found the following message is displayed in the status bar: "The search item was not found". When the item is found, the "Working..." message is replaced by a "Ready" message, and the found item is highlighted in the Main Window. *Note:* *Find is not case sensitive.* *The scope for searching is always the entire tree*.
[Close]	Click to close

Collapsing the Navigation Tree

The **Collapse All** command collapses all subtrees in the navigation tree.

➤ **To collapse the Navigation Tree:**

- From the View dropdown menu, select **Collapse All**.

  The tree displays only the root node with or without the first level of submaps.

Expanding the Navigation Tree

➤ **To expand the Navigation Tree:**

- From the View dropdown menu, select **Expand All**, or click the matching toolbar icon.

  The navigation tree expands to all subtrees, displaying all parts in the navigation tree.

Displaying/Hiding the Navigation Tree

The **Navigation Tree** toggle command is used to show/hide the navigation tree.

The Navigation Tree is displayed by default, and a √ sign appears to the left of the command in the dropdown menu.

➤ **To hide the Navigation Tree:**

- From the View dropdown menu, select **Navigation Tree**.

The Navigation Tree is hidden, the list (if exists) is displayed on the entire screen width, and the √ sign disappears from the View dropdown menu.

➤ **To display the Navigation Tree:**

- From the View dropdown menu, select **Navigation Tree** again.

  The Navigation Tree is displayed at its width before hiding it, the list is displayed at its width before hiding the tree, and the √ sign is displayed in the View dropdown menu.

Displaying the Map

➤ **To display the entire map:**

- From the View dropdown menu, select **Show All Map**.

  The entire map is displayed, and the √ sign is displayed in the View dropdown menu.

➤ **To display only selected Nodes:**

- From the View dropdown menu, select **Show All Map** again.

  Only the selected Nodes of the currently loaded Group Descriptor are displayed, and the √ sign disappears from the View dropdown menu.

Viewing the Statistics Chart

This option allows viewing statistics chart of a bundle. **Show Chart** is enabled only when a single bundle is in focus (main window tree).

➤ **To view the statistics chart:**

1. From the main window, select **View** > **Show Chart**.

   The following dropdown menu opens:

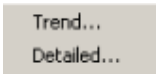

Figure 5-12. Show Chart Dropdown Menu

2. Select **Trend** to view areas within the chart (see *Trend View*).

   Or

   Select **Detailed** to view points within the chart (see *Detailed View*).

Trend View

Selecting **Trend** opens the Trend chart.

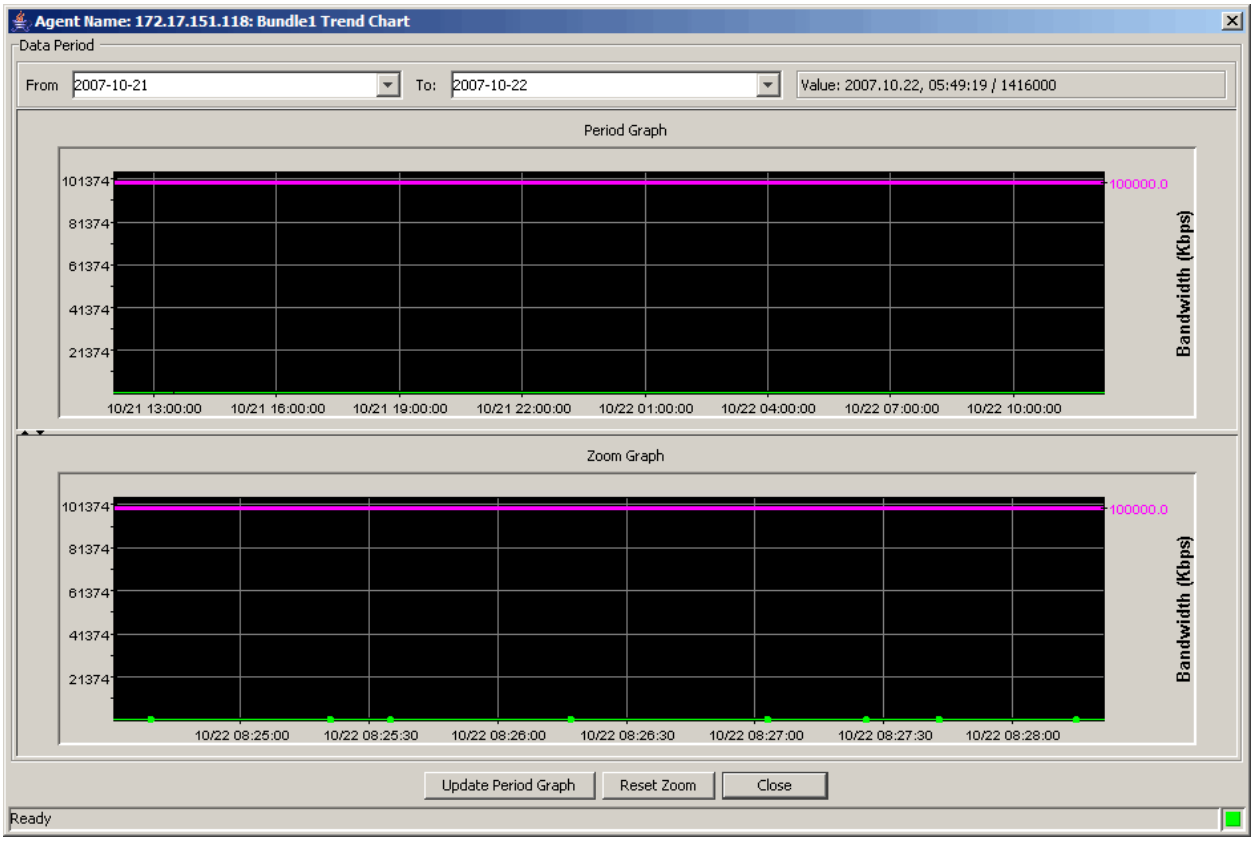

Figure 5-13. Trend Chart

Table 5-9. Trend View Parameters

Parameter Name	Values	Notes
Data Period		
From	Date, **current date** (YYYY-MM-DD)	You cannot select a date later than the date selected in **To**.
To	Date, **current date** (YYYY-MM-DD)	You cannot select a date earlier than the date selected in **From**.
Period Graph	Displaying data in the time period selected in Data Period	Drag the mouse to select areas within the graph. Such selection affects only **Zoom Graph** display. Data is taken from NMS database, but as there is too much data to be filled in this graph, the statistics application performs a compression algorithm preserving the graph behavior so that line tendency is not affected (note that extremum points might not be displayed, due to data compression.

Parameter Name	Values	Notes
Zoom Graph	Displays data in time period for area selected within Period Graph	The time period of this graph can be modified as follows: • Selecting a subperiod within **Period Graph**. • Selecting a subperiod (of displayed subperiod) within this graph. Data is taken from Period Graph after the statistics application performs the compression algorithm and not from NMS database.
[Update Period Graph]		Click to update the **Period Graph** according to the selection in **Data Period**
[Reset Zoom]		Click to reset the graph zoom to the lowest resolution
[Close]		Click to close

Detailed View

Selecting **Detailed** opens the detailed chart.

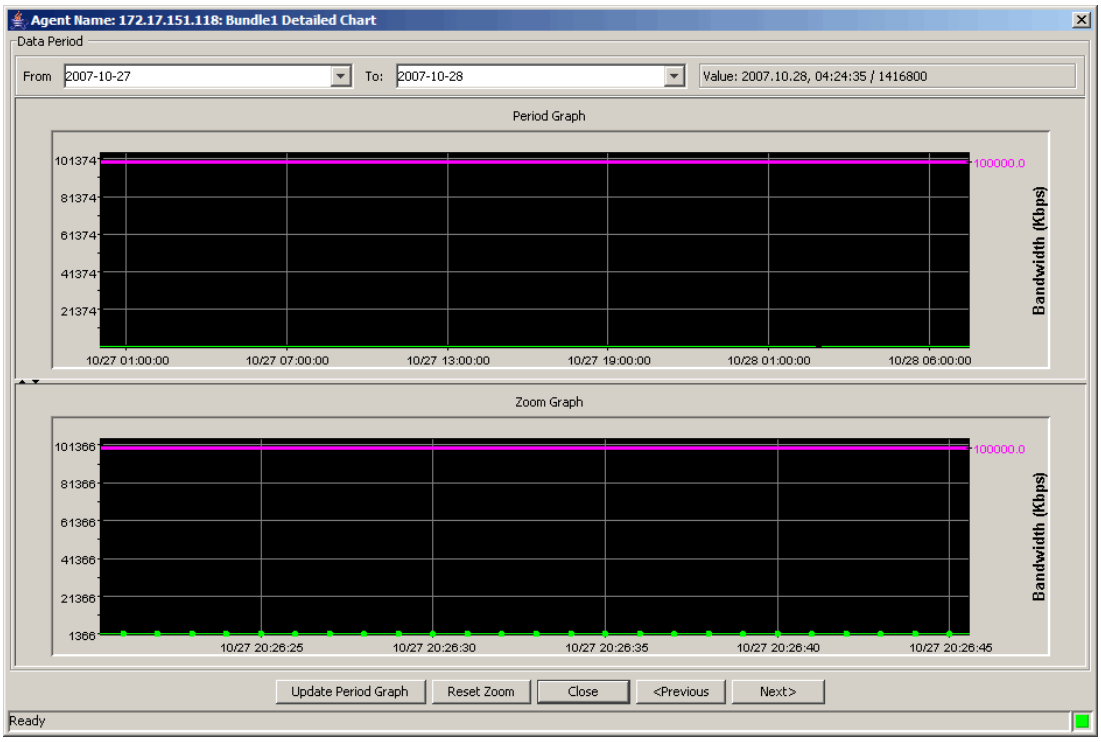

Figure 5-14. Detailed Chart

Table 5-10. Detailed View Parameters

Parameter Name	Values	Notes
Data Period		
From	Date, **current date** (YYYY-MM-DD)	You cannot select a date later than the date selected in **To**.

Parameter Name	Values	Notes
To	Date, **current date** (YYYY-MM-DD)	You cannot select a date earlier than the date selected in **From**.
Period Graph	Displaying data in the time period selected in Data Period	You can select points within the graph. Such selection affects only **Zoom Graph** display. Data is taken from NMS database, but as there is too much data to be filled in this graph, the statistics application performs a compression algorithm preserving the graph behavior so that line tendency is not affected (note that extremum points might not be displayed, due to the "smoothing action"algorithm).
Zoom Graph	Displays data in time period for point selected within Period Graph	Time period of this graph can be changed in the following ways: • Selecting points within **Period Graph**. • Clicking [< **Previous**] or [**Next** >]. Displays data that is taken from NMS database (again). This data is "real" (uncompressed). Therefore the amount of data points that can be displayed in the graph is very limited. Thus, the statistics application divides this data into Time Windows displaying a time period. You can "browse" these windows by using [**< Previous**] and [**Next >**] buttons. A scenario for example: • Time Window with time period of five hours • **Period Graph** – you can select a point with time of 12:34. • **Zoom Graph** displays time window of 12:00-17:00. • Clicking [< **Previous**] changes the displayed data period to 07:00-12:00 • Clicking [**Next** >] changes the displayed data period to 17:00-22:00
[Update Period Graph]		Click to update the **Period Graph** according to the selection in **Data Period**
[Reset Zoom]		Click to reset the graph zoom to the lowest resolution
[Close]		Click to close
[< Previous]		Click to move to the previous time window
[Next >]		Click to move to the next time window

Both period and zoom graphs represent "accident" points by drawing vertical red lines through such points. An "accident" point is defined as a point that has exceeded a "critical" level and has a certain amount of adjacent successors that have also exceeded this level.

Chapter 6

Security Management

For instructions on how to administer users in the PC environment, refer to the *Getting Started Guide* that is included in the SNMP package, or use the file from the RADview-PC/Lite SNMP CD.

Chapter 7

Fault Management

The section describes fault management in RADview-PC/Lite.

7.1 Alarms

RADview-PC/Lite automatically polls each node in the network for connectivity status at an interval specified in the RADview properties dialog box (see *Chapter 3*), and changes the color of the agent's background based on the results of the poll. The RADview-PC/Lite trap bar provides details of events received from the managed devices.

7.2 Frequently Asked Questions

This section contains commonly asked questions about RADview-PC/Lite.

Q. After I install RADview-PC/Lite, how do I know for which IP/MAC address or hostID to request the license?

A.

Note *You must have License Manager Version 2.02 (All installation setups from 2005 and later).*

The host identifier for PC is the IP or MAC address.

Windows Instructions

1. Verify that your NIC (Network Interface Card) is connected.
2. Verify that the following directories exist:
   - **C:\RV32\lic**
   - **C:\RV32\lic\jre\1.4**
   - **C:\RV32\lic\ems\bin**
3. Verify that the following files exist in the **C:\RV32\lic\ems\bin** directory:

- **Start_RvLicService.bat**
- **license_hostinfo.exe**
- **hostinfo.bat**

Note *If you do not have **license_hostinfo.exe**, you can obtain it from the zipped file attached to FAQ 6171 at the RAD Technical Support eSupport site.*

4. Double-click on **hostinfo.bat**.

   A CMD prompt window appears with the IP address and the MAC address that the License Manager uses.

Note *If you do not get the MAC address in the prompt, it means that you did not install SNMP services and SNMP Trap service on your station and therefore the license manager does not support a MAC address. To correct this, install/reinstall SNMP services and SNMP Trap service on the station.*

If you encounter difficulties installing the license, you should provide the output of the above procedures to RAD Technical Support.

7.3 Technical Support

Technical support for RADview-PC/Lite can be obtained from the local distributor from whom it was purchased.

For further information, please contact the nearest RAD distributor or one of RAD's offices worldwide. This information can be found at RAD's Web site: http://www.rad.com/ (for office locations, click **About RAD > Worldwide Offices**; for distributors location, click **Where to Buy > End Users**).

Index

–A–

Alarm
  status colors, 3-5
Alarms, 7-1

–B–

Backup, 4-10
  configuring, 4-11
  requirements, 4-11
  running, 4-14
Bundled license, 4-3

–C–

ConfiguRAD, 1-2
Configuration Management, 1-2

–D–

Diagnostics, 1-2

–E–

ENW, 4-2
Equivalent Node Weights, 4-2

–F–

Fault Management, 1-1
Features, 1-1
Functions supported, 1-2

–H–

Hardware requirements, 1-4

–I–

Installation
  Hardware requirements, 1-4
  Package contents, 2-1
  Sequence, 2-1
  Software requirements, 1-5
Installing
  License Manager, 2-15
    manually, 2-18
  licenses, 2-21
  RADview Shell, 2-6
  RADview-PC/Lite, 2-12
  RADview-PC/Lite package, 2-6
  SNMPc, 2-1

–L–

License
  Add, 4-7
  Calculating Points, 4-3
  Loading, 2-22
  Points, 4-3
  Remove, 4-7
License Calculator, 4-4
License Manager
  Installing manually, 2-18
License Server
  Remote, 2-21
License service manager, 4-4
  Add license, 4-7
  Managed element list, 4-6
  opening, 4-4
  Remove license, 4-7
License Service Manager
  Client Configuration, 4-9
  Server Configuration, 4-9
License,bundled, 4-3
Licenses
  installing, 2-21
Licenses installed
  viewing, 4-4
Licensing
  Network size, 4-1
Licensing, 4-1
  Terms, 4-1

–M–

Managed element list, license service manager, 4-6

–N–

Net inventory, 4-39
  editing an entity, 4-43
  filtering display, 4-41
Net Inventory
  Table parameters, 4-40

–P–

Products supported, 1-2

–R–

Radview properties, 3-9
  Configuration tab, 3-11
  Info tab, 3-12
  Net tab, 3-11
  Online tab, 3-10
Radview shell
  Trap bar, 3-8
Radview shell, 3-8
Radview shell

RV32 icon, 3-8
RADview Shell
Installing, 2-6
Requirements
Hardware, 1-4
Software, 1-5
Restore, 4-10
configuring, 4-11
requirements, 4-11
running, 4-15

–S–

Setup
Hardware requirements, 1-4
Software requirements, 1-5
Severity
event, 3-8
SNMPc
alarm status indications, 3-5
GUI, 3-4
Installing, 2-1
license number, 3-2
Uninstalling, 2-23
Upgrade Key, 3-2
Software requirements, 1-5
System Requirements, 1-4

–T–

TFTP file transfer, 4-16
add agent from map, 4-30
default settings, 4-17
Editing database, 4-18
Help menu, 4-38
Opening, 4-16
options, 4-23
product profile
adding, 4-18
remove agents, 4-30
report status messages, 4-36
reports, 4-35
save database, 4-38
selecting nodes, 4-27
transferring files, 4-31
TFTP File Transfer
adding agents, 4-29
download file, selecting, 4-25
editing product data, 4-25
Trap
bar display, 3-9

–U–

Uninstalling
RADview-PC/Lite, 2-22

–W–

Workgroup/Enterprise Base Key, 3-2

RAD
data communications
The Access Company

24 Raoul Wallenberg Street, Tel Aviv 69719, Israel
Tel: +972-3-6458181, Fax +972-3-6483331, +972-3-6498250
E-mail: erika_y@rad.com, Web site: http://www.rad.com

Customer Response Form

RAD Data Communications would like your help in improving its product documentation. Please complete and return this form by mail or by fax or send us an e-mail with your comments.

Thank you for your assistance!

Manual Name: RADview-PC/Lite Ver. 1.7

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Please grade the manual according to the following factors:

	Excellent	*Good*	*Fair*	*Poor*	*Very Poor*
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Operating instructions	❒	❒	❒	❒	❒
Manual organization	❒	❒	❒	❒	❒
Illustrations	❒	❒	❒	❒	❒
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International Headquarters

24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel. 972-3-6458181
Fax 972-3-6498250, 6474436
E-mail market@rad.com

North America Headquarters

900 Corporate Drive
Mahwah, NJ 07430, USA
Tel. 201-5291100
Toll free 1-800-4447234
Fax 201-5295777
E-mail market@radusa.com

www.rad.com

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